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Number 21

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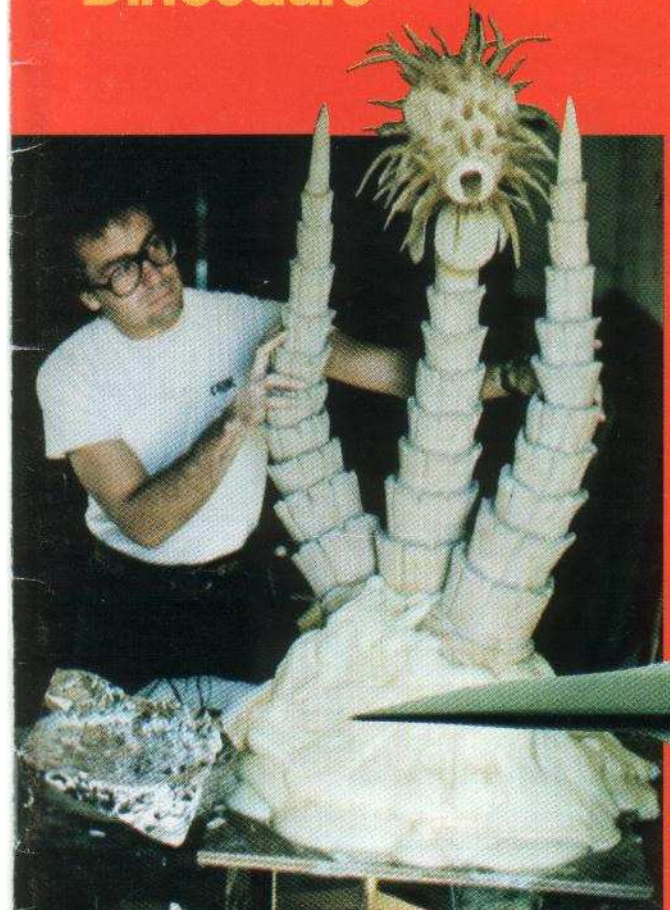
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Spaceships
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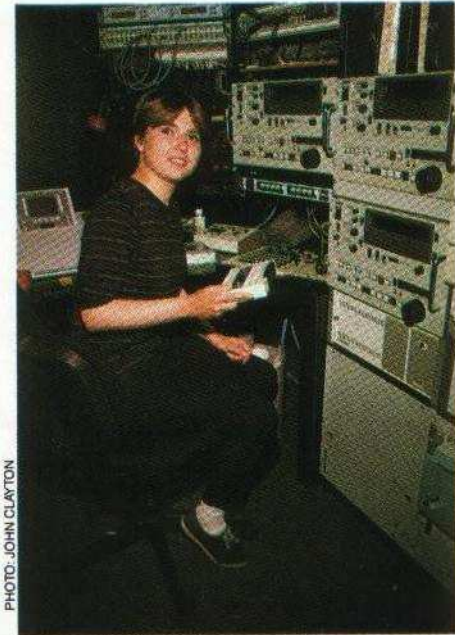
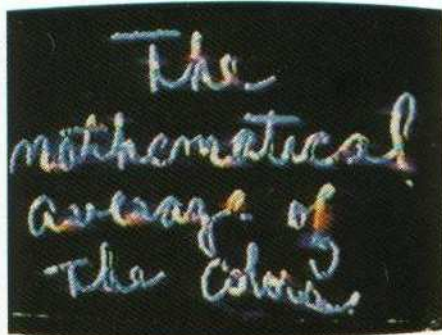


PHOTO: JOHN CLAYTON



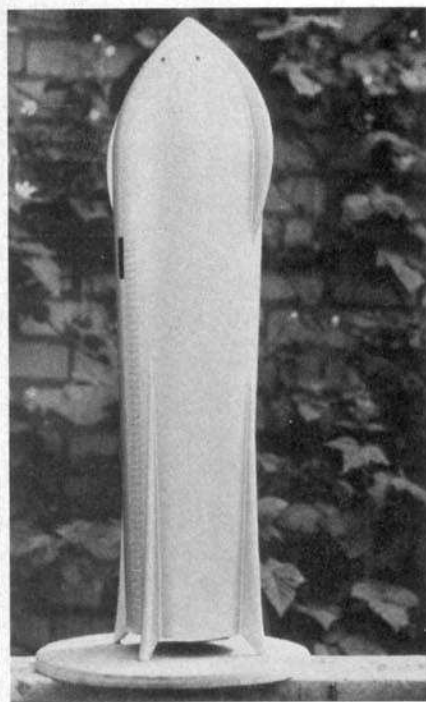
Top left: Deborah Von Moser, video artist, at the editing console of Brooks Harris' Motor Video Corporation. **Middle left:** A computer enhanced video image and a computer graphic created by Deborah Von Moser. See the Profile on Ms. Von Moser on page 14. **Bottom left:** A production still from Sergio Squarotti's film, *Starship TH3*. Sergio is one of our readers who lives in Italy. See the Producers' Bulletin Board Section on page 26. **Above:** Two production stills of Robert Short's work on the botanical garden sequence that appears in Steven Spielberg's *E.T.* See the story on Bob Short's career as a special effects artist on page 30.

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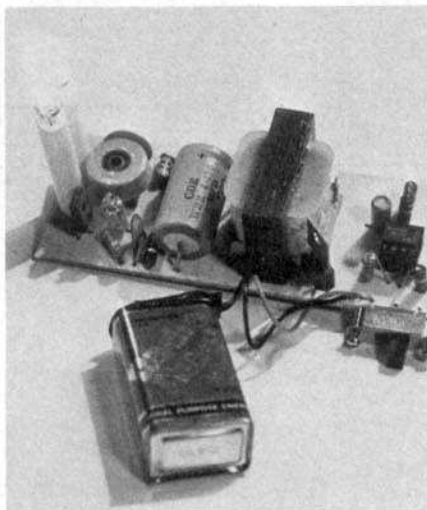


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About the Cover: This composite cover illustrates the many aspects of special effects filmmaking that are covered in this issue. Dinosaurs (stop motion modeling) can be found on page 34. Creatures and Special Props are the creations of Robert Short, whose career as a special effects artist is covered on page 30. Spaceships are expertly modeled on page 6. The spaceman is from our Producers' Bulletin Board section, on page 26.

Editor's

BENCH

The Doers and the Do Nots

A few months ago, I was making my way from department to department in the Walt Disney Studios gathering material for an article on the special effects for the film, *Something Wicked This Way Comes*. One of my stops was with Disney veteran Harrison Ellenshaw, who took a few minutes from his busy schedule to share some thoughts on filmmaking and filmmakers in general.

"I think the business divides itself right down the middle," begins Ellenshaw. "There are the filmmakers and there are the non-filmmakers. I don't mean that all the George Lucas and Steven Spielbergs are on one side and all the others are on the other. There are all levels of filmmakers. There are the people who are in-betweeners in animation, in-betweeners in FX animation, production assistants... they are filmmakers, too. They get that same rush out of dailies, even if they were just on the set to answer the phone for that day. Just to be a part of it by making a contribution in some way—however large or small. They get the same satisfaction out of seeing a good shot and to be working on a good shot.

"Then there are the non-filmmakers—the people who are involved in the business for a variety of reasons—either money or for other reasons—but they do not necessarily care about the film itself."

I remember speaking to mechanical effects veteran A.D. Flowers who went into retirement after he completed Spielberg's *1941*. He observed that too many people today are in the business of filmmaking to make a buck. "Now, don't get me wrong," he said "I'd be the last person to say that people shouldn't make money, but there are too many people who don't care *how* it is being made—they want a return on their dollar investment and they want it fast.

"I began working in what they call the Golden Age of motion pictures with big stars and big movie producers—the people that really made the movie industry. Louis B. Mayer is a good example of a real motion picture fan. He made a fortune making good pictures.

"I think Coppola and Spielberg are good examples of men whose emphasis is on making good motion pictures rather than making dollars. Too many others will grind out anything, just to get a return on their dollar," Flowers concludes.

Harrison Ellenshaw's thoughts are well illustrated by A.D. Flowers. "A good friend of mine," continues Ellenshaw, "said that all he wanted on his gravestone were the words: 'He had the spirit of a filmmaker.' This particular person may not have the five top-grossing films of all time, but he does have the spirit of a filmmaker. Those are the people who I hope I associate with. Those are the people who are interesting and those are the people who will advance the art form, make it better, make it more interesting. Those are the people who take the chances.

"Then there are the other ones," Harrison pauses for a moment searching for the right words. "Who cares?" he asks, dismissing the thought. "The other ones are too busy trying to imitate."

—David Hutchison

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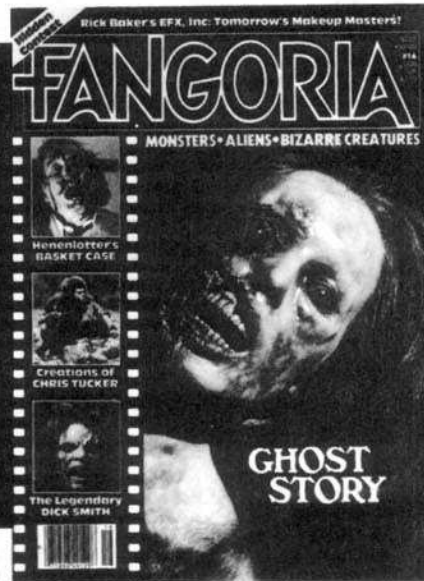
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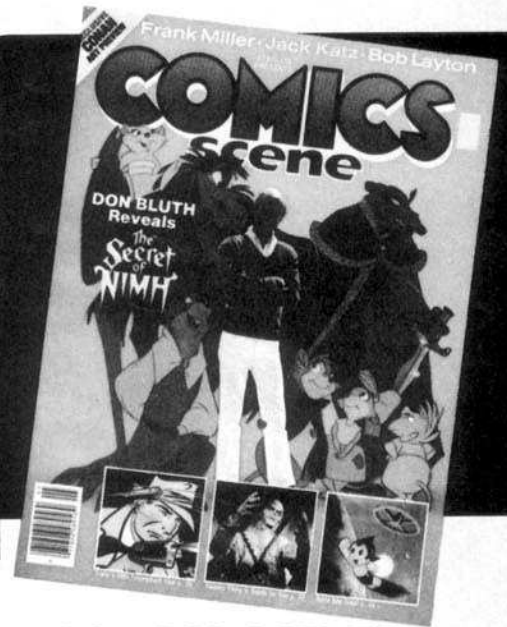
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Custom Built Spaceships and Towers

By A. SHARPLES



There is now such a wide variety of plastic disposable containers readily at hand that one does not have to look far to find a suitable object to form the basis of a model spaceship. However, when a rounded model design of precise shape and dimensions is required, most modelmakers think in terms of lathe work or look for the nearest equivalent to their design in the form of a model kit.

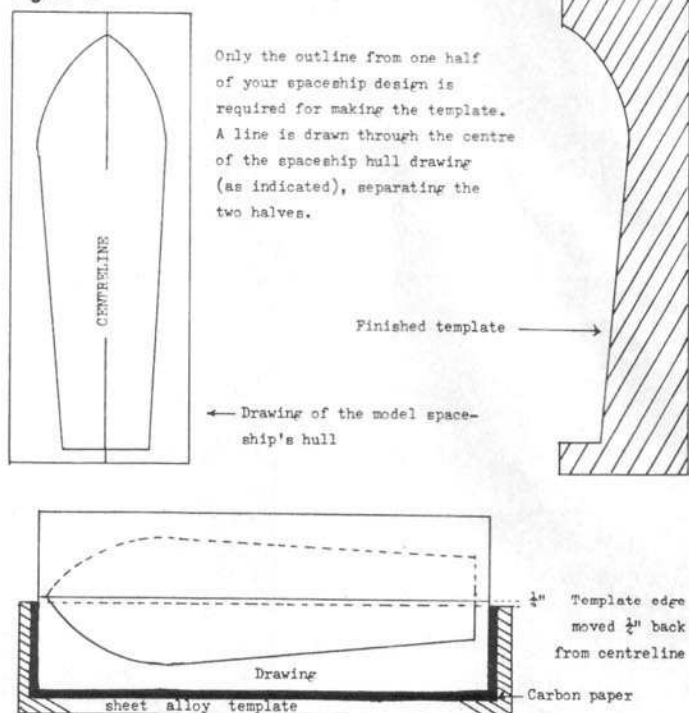
This article offers a simple solution which will enable you to transform your own basic spaceship drawing into a durable three-dimensional model.

The method requires a template to be shaped from one half of the drawing. The template is then used to form the shape of a plaster mold, from which a negative fiberglass mold is made. From the negative mold a very durable fiberglass model is formed.

For illustrative purposes, I decided to construct a recognizable model—the Rocketship XM as featured in Cinemagic #1. Having no intention of using the model for filming purposes, I have not concerned myself with accuracy in reconstruction, as this would have been too time-consuming. The model can be built in about two weeks of spare time, including detailing and painting.

Although the XM model is represented here, my intention is to show a method of model construction which will enable you to build the basic round

Figure 1.



When registering the outline of the drawing through carbon paper onto the sheet alloy template, allowance must be made for the diameter of the shaper bar in use, i.e. if the shaper bar is $\frac{1}{4}$ " in diameter, then the template must be moved back by $\frac{1}{4}$ " from the centreline of the drawing (as illustrated). Failure to do so will result in a model which is $\frac{1}{2}$ " wider than the original drawing.

ART. A. SHARPLES

structure or fuselage of a model of your own choice and design.

MAKING THE TEMPLATE

Only the outline of half the drawing is needed for making the template. I find that sheet alloy (available from any sheet metal works) is most suitable for making the template, as it is light-weight, does not rust and is easily worked.

The sheet alloy should be a little larger than half the drawing (see Figure 1). A piece of carbon paper is placed between the drawing and the template, then, with the centerline of the drawing lined up to one edge of the underlying metal, trace half the model's outline onto the template. The polished surface of the alloy should be gently rubbed down with fine sandpaper or powdered chalk to allow the carbon tracing to register.

Using a jigsaw fitted with a metal-cutting blade, cut round the outline traced onto the template, cutting close to the line, but not actually on it. The edge is now carefully filed down to the line, sanded down with fine sandpaper, then polished up with fine "wet or dry" paper (wetted).

The finished surface of the rocket's hull is only as good as the shaped edge of the template. Extra care at this stage will save a lot of work at the final stage. Handle the template with care to avoid damaging its polished edge.

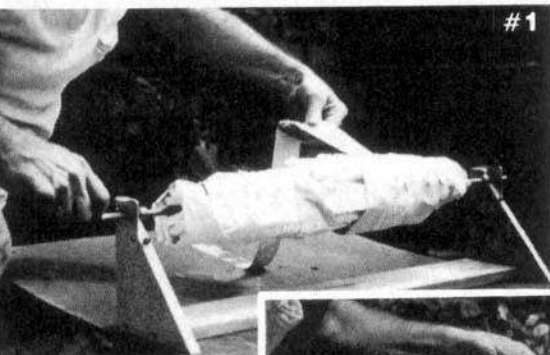
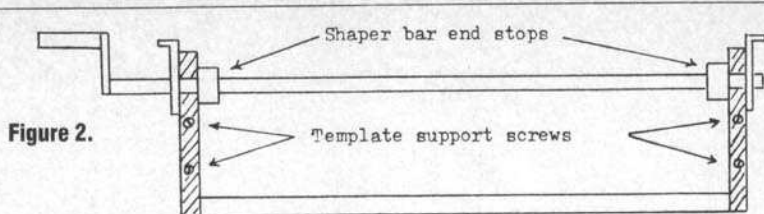
THE SHAPER

The plaster rocket shape is built up on a hand-turned bar which is fitted onto a stand. For want of a better name, we will call this bar the "shaper." The shaper support stand also supports the template (see Figure 2 and photos No. 1 and 2).

As the bar must support the weight of a two-foot plaster rocket shape, I decided to make the shaper bar from steel rod. I fitted a handle to one end to allow the bar to be turned at a constant (slow) speed. For smaller models, hardwood dowelling would serve in place of steel. End stops are fitted to the bar to prevent slide movement, which would impair the finished plaster shape (see Figure 3).

If the template used is large, it should be reinforced at its rear with timber. The wood backing should be cut to allow $\frac{3}{8}$ -inch clearance at the template cutting edge and side clearance for the template to be secured to the sides of the shaper stand (see Figure 3).

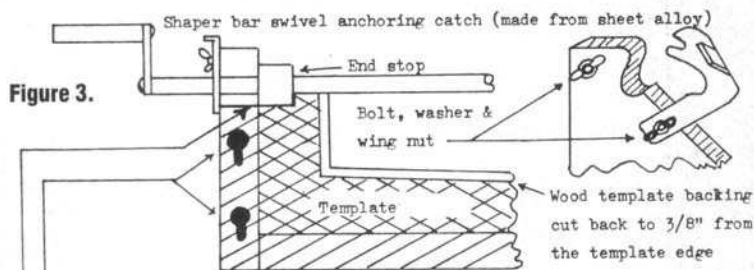
During the final stages of building up the plaster on the shaper bar, the template may have to be removed several times to be washed down between separate plaster mixes. Figure 3 illustrates a simple method of removing the template from the support stand without damaging the surface of the plaster mold.



Left: Strips of plaster embedded polystyrene can be used in the initial build-up to conserve both weight and plaster. Follow these with plaster soaked strips of hessian.



Right: Finishing the plaster build-up. Note that the template is already in place on the support stand. The final coat of plaster should be a thin (running) mixture. The surplus plaster spillage can be re-used while workable.



Cut out slots on both ends of the template. Round head wood screws are permanently fitted to both ends of the shaper stand. The cut out location slots on both ends of the template are placed over the screws. The template is then pushed upwards and locked into position with the screws. Cut out this section of the template to allow for the shaper bar end stop.

"RUNNING" THE MOLD

The term "running" refers to the pouring of plaster while turning the shaper to form the shape determined by the template's edge. With the shaper bar secured to the stand—but without the template being fitted at this stage—we are now ready to build up the plaster on the shaper bar.

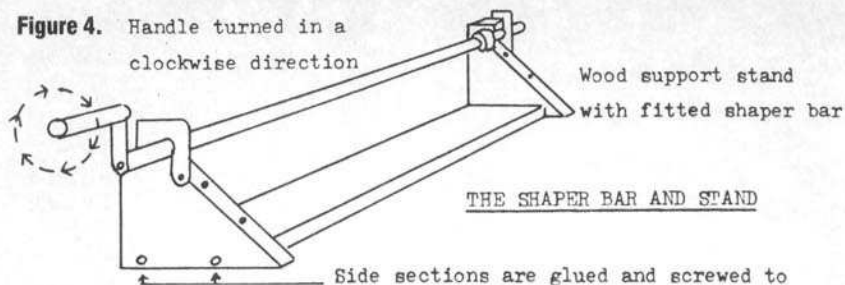
To form a "key" to secure the plaster to the shaper bar, a strip of scrim, hessian or similar material is epoxied to the shaper bar within the template's cut out area. A thin mix of plaster of Paris or casting plaster is now worked into the epoxied hessian strip. The initial shape is now built up by dipping strips of the

hessian into plaster and wrapping these around the shaper bar. Using the shaper bar handle will help to speed up this stage (see Photo 1). Continue in this manner until the plaster-soaked bandage is within $\frac{1}{2}$ -inch from the template's edge when fitted.

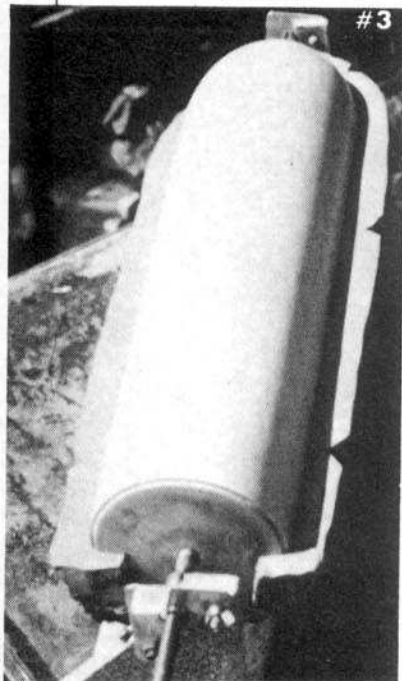
Now fit the template into position on the support stand.

Make another thin (runny) plaster mix and, while turning the shaper handle, pour the plaster carefully along the length of the pre-bandaged plaster on the shaper bar. An old pan is ideal for this purpose (see photo 2). The surplus plaster spillage can be re-used while still workable.

Figure 4. Handle turned in a clockwise direction



Side sections are glued and screwed to the baseboard.



Half of the plaster mold is now imbedded in clay. Note the cut out locating notches. The clay mold's edge should cover exactly half of the plaster mold.

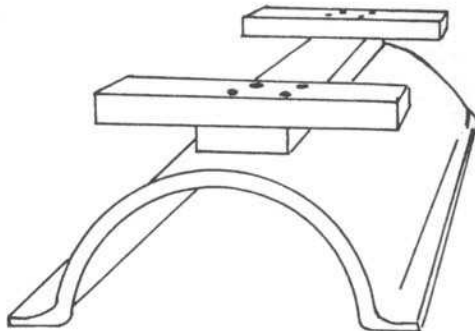
Work fast, and remove and wash down the template between mixes. *Always* turn the shaper bar handle *in one direction only*, as indicated in Figure 4.

When the plaster mold is finished to your satisfaction, splash the mold with clean water, at the same time turning the shaper bar handle. This both removes excess plaster caused by swelling and polishes the plaster's surface. Remove the template from the support stand.

If there be any minor faults on the mold's surface (e.g. scratches or air holes) do not attempt to repair these, they will be dealt with at a later stage. After about half an hour the plaster should have set hard and feel dry to the touch.

With the plaster mold still resting on its support stand, two or three coats of shellac (available from most paint supply stores) are applied to its surface. Allow each coat to dry. If the shellac proves too thick, it can be thinned down with denatured alcohol. To eliminate brush marks, use a piece of sponge to apply the shellac. When the last coat is dry and the surface has a hard sheen, wax polish the surface with a non-silicone polish.

Figure 5.



A simple wooden support stand is glassed into position with C.S.M. on the completed 'negative' half of the fibre glassed mould.

FIBERGLASS MATERIALS

Before we proceed with the fiberglassing, I have made a list of the various materials that will be required. These can all be obtained from a fiberglass supplier (see Yellow Pages of your telephone directory). Do not purchase fiberglass auto repair kits, as these are expensive and unsuitable for the job at hand.

For British readers, one reputable mail order supplier offering a post free (British Isles only) price list and free instructional booklet is: Glasplies, 2 Crowland Street, Southport, Lancashire PR9 7RL.

Release Agent—Usually blue in color. Meths. based. Dries in about 1/2 hour. It forms a barrier between the molds to allow them to be separated.

Catalyst or hardener—Added to the resins to afford a set. Follow the makers' instructions for mixing quantities and setting times.

Gel Coat—A thick resin. Usually available in white or clear for adding various pigments, including metallic. This is the initial coat and requires more catalyst than laminating resin. Takes up to 24 hours to cure.

Laminating Resin—For laminating fiberglass C.S.M. (Chopped Strand Mat).

C.S.M.—As stated above.

Fiberglass Surfacing Tissue—Very thin. For reinforcing gel coat.

Acetone—A solvent for cleaning brushes, etc. Cellulose thinners will do the same job.

There are other materials (fillers, retarders, accelerators, etc.), which you can enquire about at your supplier.

Resins should be kept in sealed containers and stored in a cool place away from light, because heat and light will harden them. Catalyst requires careful storage. Follow the manufacturer's instructions carefully. Work in *well-ventilated* conditions. Weather permitting, I prefer to work outside.

GLASS NEGATIVE MOLD

The negative glass mold is cast in two halves. Clay is formed around one half of the plaster mold. The edge of this should lie exactly half way round the plaster mold or you could have difficulty separating the glass molds when completed. A halfway line can be drawn around the plaster mold with a felt-tipped pen as a guide for the clay edge.

With a sharp knife, cut two or three tapering "Vee" slots on the outer edge on both sides of the clay. These location notches will serve to register the two negative mold halves together (see photo 3).

Sponge a liberal coat of release agent onto the exposed plaster half of the mold, overlapping onto the clay edge. Allow to set.

Next, apply a liberal gel coat over the exposed plaster half of the mold, including the clay edge and the cut out notches. Allow to cure.

A layer of glass tissue is then glassed onto the gel coat with laminating resin. First, brush a coat of resin over the gel coat (you may have to tear the tissue to form it around the contours); then brush a coat of resin onto the tissue. Although I state "brushing," what is really needed is a dabbing motion, since, due to the consistency of the resin, a brushing stroke would push and lift the tissue. Allow the resin to cure.

Layers of the C.S.M. are now built up on top of the tissue. There is no need to wait for each layer to set. The C.S.M. can be built up with one mix of laminate resin to at least 1/8-inch thickness. Allow the C.S.M. to overlap and protrude past the clay edges.

When starting to set, the resin turns to a green color, and in this state the fiberglass can be cut with a sharp knife. Cut off the flashing around the outer edge of the clay.

A simple wooden support stand can be made, as illustrated in Figure 5, and fiberglassed into position on the now completed glassed half mold. Turn the mold over onto its stand and remove the

clay. Wipe the plaster clean with a damp cloth to leave no trace of clay (see photo 4) then dry off with a clean cloth.

Apply a liberal coat of release agent over the top half of the mold and around the outer glass lip surrounding the mold.

Repeat the glassing of the upper half of the mold as before and allow maximum curing time before attempting to separate the two halves. Failure to do so could result in distorting the shape.

The two glassed halves are separated (see photo 5). If you have difficulty separating them, pry between the edges and pour boiling water into the seams.

You may find that some of the skin of the plaster mold has stuck to the inner surface of the glass molds. However, the plaster mold has now served its purpose. Wash down the inner surface of the glass molds with hot, soapy water to remove the gel coat and any plaster remains.

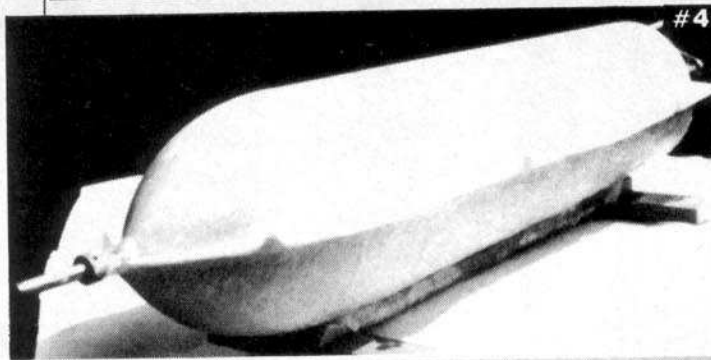
Any minor defect in the surface of the plaster mold—as mentioned earlier—will now stand out on the inner surface of the glass molds. These can now be gently sanded down with "Wet and Dry" paper (wetted). Dry off the molds, wax polish and apply a coat of release agent. When this has set, the two mold halves are placed together, with the aid of the locating notches. Secure them with belting or something similar. I opted to use a tourniquet (see photo 6). Do not overtighten.

Prior to construction, I was unsure whether the opening at the base of the model would be wide enough to allow my arm to reach inside to glass the interior, so I worked out alternative methods. The first idea was to fill the interior of the mold with rigid expanded polyurethane foam. Two liquids are mixed together to produce a foam similar in texture to polystyrene; but whereas polystyrene melts on contact with polyester resin, polyurethane foam can be resin laminated. The mix expands to 25 times its original volume. Supplies should be available from your fiberglass supplier. The finished polyurethane model hull could be sanded down, the surface resin laminated and then painted in the usual manner.

A second method was to swill a thinned gel coat around the interior of the negative mold and allow it to cure. Shredded C.S.M. would then be added to a laminate resin, and this would also be swilled around the interior. Layers of this would be built up, allowing each swill layer to set, to produce a thickness of about $\frac{1}{8}$ -inch.

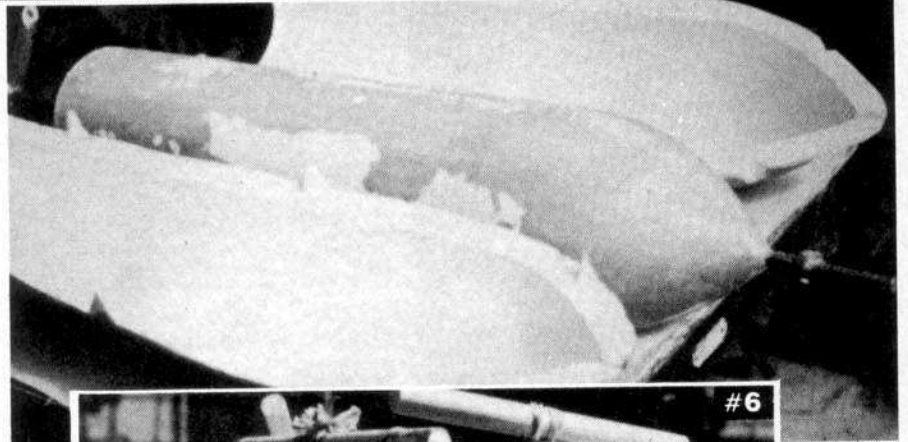
For smaller models, one of these two methods could be used. Polyurethane opens up further possibilities. Unusually shaped spaceships could be carved from it, sanded down and then resin laminated.

As it happened, the opening at the base of the mold was large enough for

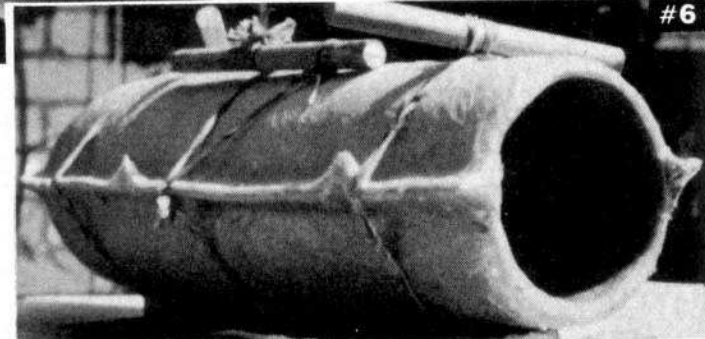


#4

Left: The upper half of the plaster mold has been fiberglassed and the clay has been removed from the lower half, after allowing the fiberglass to set.



#5



#6

Above middle photo: The second half of the negative mold is now completed. After allowing the fiberglass to cure, the two halves are separated from the plaster mold. **Above:** The negative molds are bound together with the aid of the locating notches. Secure them with belt or something similar. Do not over tighten.

me to reach into, but not sufficiently for me to apply a tissue layer. Without this, there is danger of trapping air pockets between the gel coat and the C.S.M.

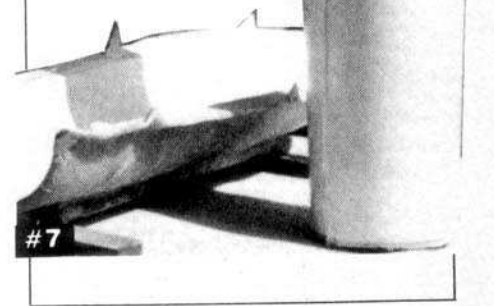
I applied two gel coats to the mold interior—allowing each coat to cure. The C.S.M. can be peeled off into layers. I laminated a thin layer of the C.S.M. next to the gel coat, then continued the C.S.M. build up in the normal way. The flashing protruding from the base of the mold was trimmed off while "green."

After curing, the negative mold halves were removed. Apart from minor flashing on the seam, which is usual, the mold was good (see photo 7).

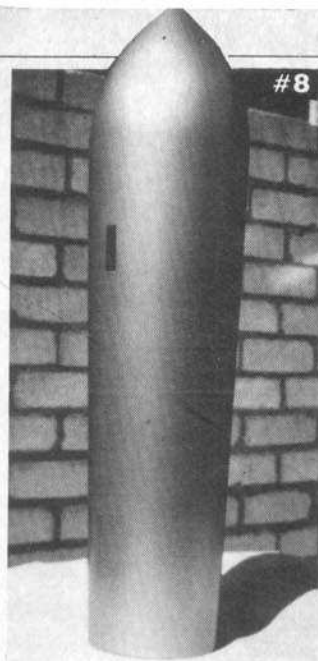
Using this method of molding, there will be a small plug of solid glass at the apex of the model's nose, caused by the shaper bar. This should be filed down to shape, then sanded down with wetted "wet and dry" paper.

Sand down where necessary. Auto cellulose putty can be used to fill in any areas of the glass hull as required. Spray primer, sand down, and paint in the usual manner.

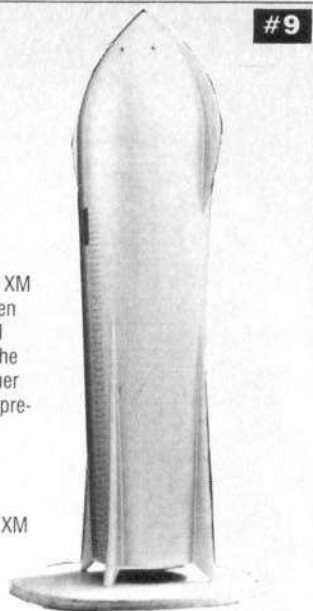
After curing, the positive mold is removed. This now requires the flashing to be trimmed and sanded down as necessary. Auto cellulose putty can be used to fill any gaps in the hull.



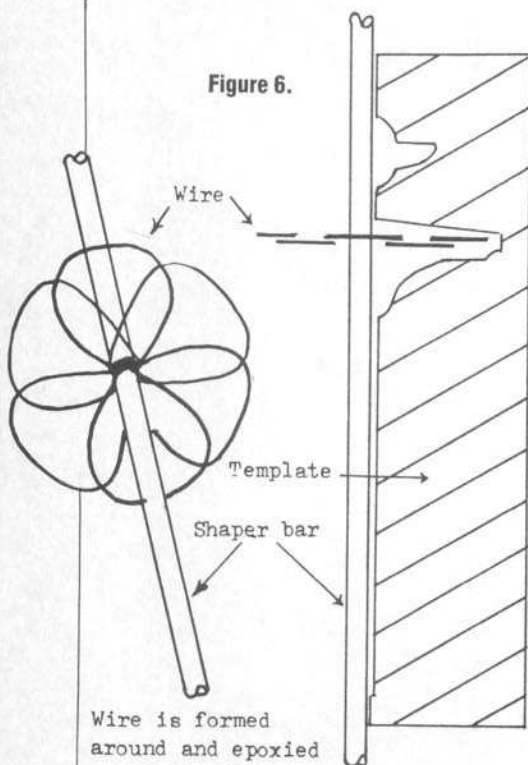
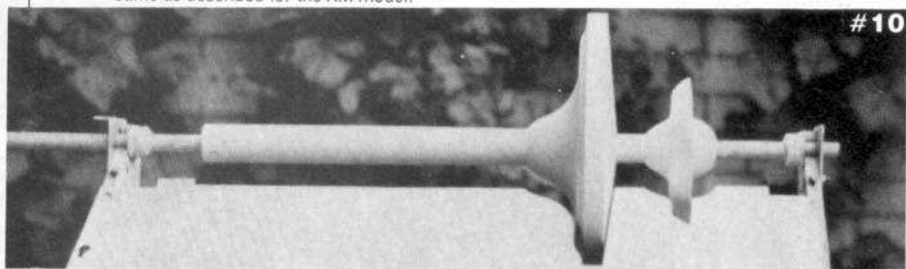
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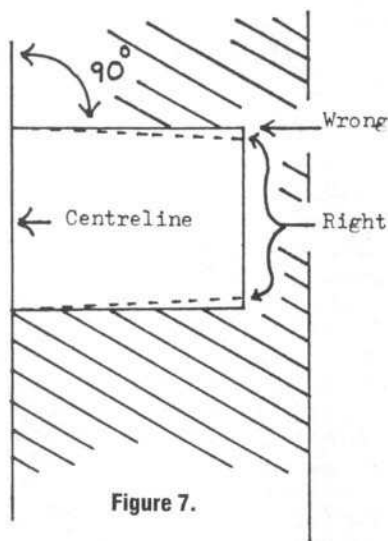
Left: The Rocketship XM hull has been sanded and painted in the usual manner and is now prepared for detailing.
Right: The completed Rocketship XM model.



Below: The plaster tower mold on the shaper stand. The template had been released. Note the wooden bobbin end stops. The method of transferring the design drawing to the template is the same as described for the XM model.



Wire is formed around and epoxied to the dowel shaper bar to lie centrally in the cut out area of the template.



When designing any model which is to be shaped in plaster with a template, avoid angles which are 90 degrees to the centreline. This would make it difficult to separate the template from the finished plaster mould.

The detailing of the model was done in a manner similar to that described in the Rocketship XM article in CINEMAGIC #1 (see photos 8 and 9).

PLASTER TOWERS

These are both simple and quick to make, and as they are literally throw-aways, they can be cast in plaster without the need to make special glass molds. The model tower (see photo 10) can be built at leisure in half a day.

The tower structure was made on the shaper stand used for the XM model. For plaster tower construction, the steel shaper bar was replaced with hardwood dowelling. The end stops were made from a wooden bobbin. This was sawed in half and the two halves then epoxied to the dowelling shaper bar. Again, hessian strips were epoxied to the shaper bar to form a key for the plaster.

I designed the tower with a wide, thin turret, to illustrate the versatility of reinforced plaster. The reinforcement is in the form of twisted wire epoxied to the shaper bar to lie centrally between the turret cut out on the template (see Figure 6). Plaster-dipped strips of hessian are then wrapped around the wire.

At the drawing stage of the tower design, allow all projected angles to taper slightly inwards as indicated in Figure 7, or you will have difficulty in separating the template from the plaster mold, resulting in a damaged model.

The method of transferring the drawing to the template is the same as that described earlier for the XM model. Also, the plaster build-up on the shaper bar is the same as that applied to the final stage of the XM plaster hull.

When the plaster build-up is completed and the plaster has been allowed to set hard, the dowelling directly above the tower head is sawed off. This can now be trimmed, either by fitting a predetermined plastic cap, by shaping over with plaster, or by any other means you may decide on. The dowelling at the base of the tower is sawed off to within 1-inch of the plaster base. A hole of the same diameter as the shaper bar dowel can be drilled in the baseboard of a miniature set, so as to support the plaster tower.

The plaster would normally take a few days to dry out, but this would delay filming. To avoid this, you can paint the tower half an hour after completion by sponging a few coats of shellac onto its surface. When dry, it can be spray painted in the usual way. You can also paint the undried tower with emulsion, but the first coat should be thin, because of suction, and should be sponged on.

You will have difficulty repairing any defects in the plaster tower's surface while the plaster is wet. In such cases, apply a little thinly mixed plaster to the affected area of the tower while the

tower is still damp. Wait until the plaster dries out completely and then sand down with fine sandpaper fitted to a sanding block.

If you wish to give a coarse finish to the tower's surface, first seal the surface with shellac. When this has dried, paint a coat of glue over the tower and sprinkle fine, sifted sand onto the glued area. This can be left as it is or sprayed as desired.

To create the effect of internal lighting, Scotchlite strips can be fitted over the window areas. Frontal lighting will

then make the Scotchlite window strips appear to be internally lit. With a beam-splitter mirror you could even project images of people into the Scotchlite window area.

MODEL SAUCERS

(Using the technique described here, I have built two model saucers, both custom designed.

To have constructed both the XM model and a glass saucer for illustrative purposes would unfortunately have been too costly and time consuming,

but I will guide you through the various stages of model saucer construction with diagrams.

Saucers, domes and similar shaped objects require a different molding technique from that mentioned earlier for vertically shaped spaceships, but the method of fiberglassing is the same.

The saucer is constructed in two halves, each half being built separately. On completion, the two halves are glued together. The method of making the alloy templates for the two saucer halves is the same as that described for making the XM template (see Figure 8).

THE SHAPER

The XM plaster molding technique required the template to remain static while the plaster revolved. The method of plaster molding for saucer modelling requires a more orthodox approach, whereby the template is turned to form the required shape and the plaster remains fixed.

The plaster is 'keyed' on a baseboard, onto which the plaster is built up.

The Shaper (see Figure 9) is fitted to a center pin on the baseboard, on which it turns to form the plaster to the shape of the template.

First make the two shapers to support the templates for the upper and lower halves of the saucer. Drill small holes in the templates and nail the templates to the shapers with panel pins.

The two accompanying baseboards are now made complete with centerpins and plaster 'key' pins interlaced with string (see Figure 10).

RUNNING THE MOLDS

The hole in the shaper toe-piece is placed onto the centerpin on the baseboard (see Figure 10) and plaster mixes are poured onto the baseboard while turning the shaper. Turn the shaper in one direction only. The side of the shaper with the template fitted to it determines the direction of the turn. Right-handed persons would turn the shaper in a clockwise direction, so the alloy template would be on the side of the shaper which pushes against the plaster.

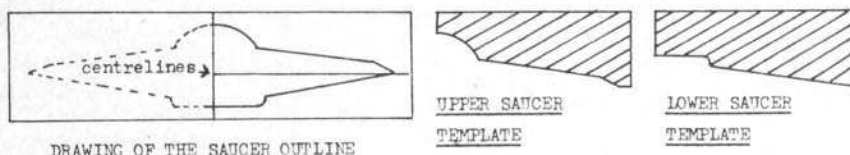
The initial plaster mixes to build up the bulk of the shape should not be thin, but as the shape nears completion, use thin mixes. Wash the shaper between mixes with clean water.

As with the XM plaster molding, when the shape is to your satisfaction, splash the mold with water while turning the shaper. If on close inspection you notice any pin holes, apply a watery plaster mix while turning the shaper. Repeat this procedure with the other baseboard/shaper.

Allow half an hour for the plaster to set hard, then apply 2 or 3 coats of shellac, until you have a hard sheen. Allow the shellac to overlap onto the baseboard by around 2-inches.

Figure 8.

THE SAUCER TEMPLATES



As with the XM model, only half of the outline of the saucer design is required for making the templates. As the saucer is moulded in two halves, centrelines are drawn through the vertical and horizontal planes of the drawing, thus separating the two halves in preparation for the templates.

Figure 9.

THE WOODEN SAUCER SHAPER

* Dimensions are dependent on model size

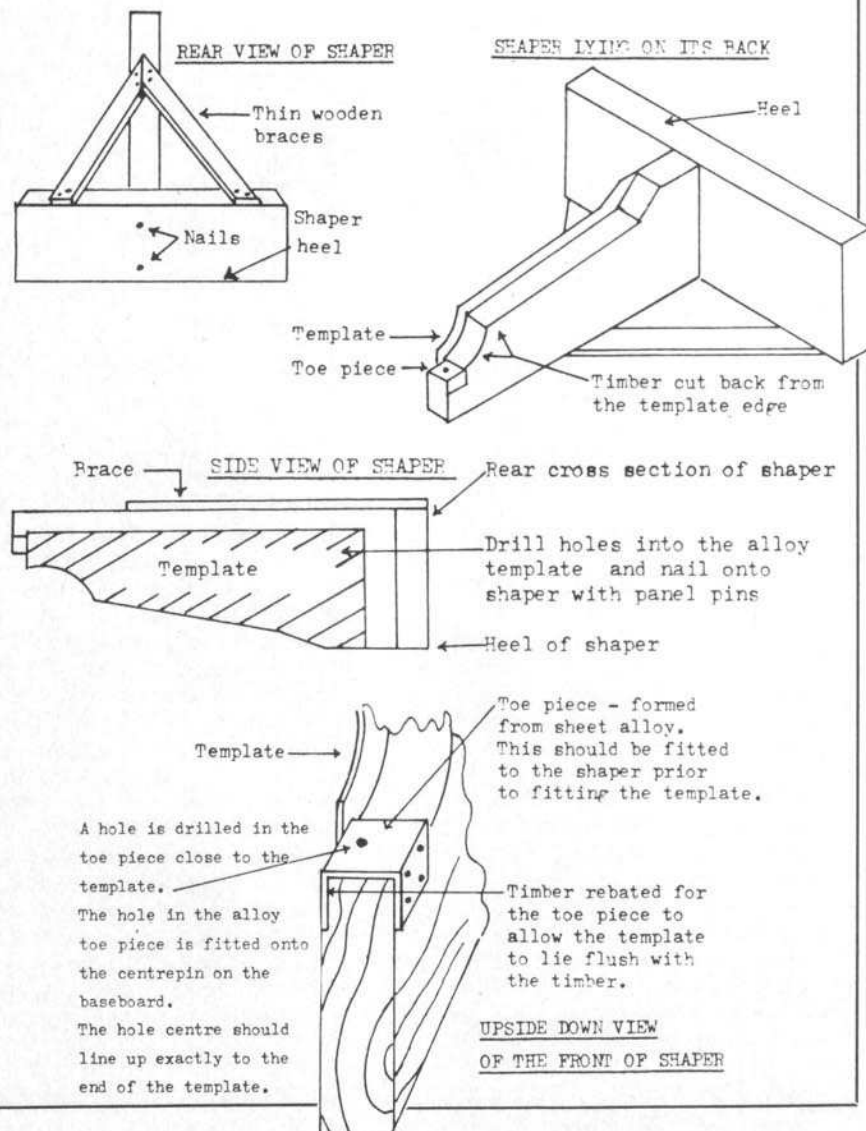
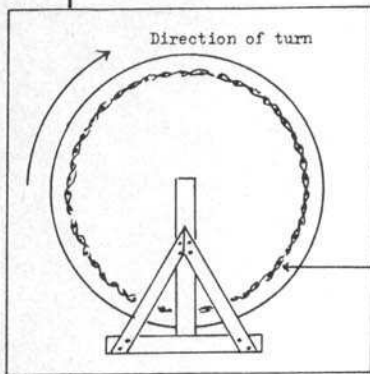


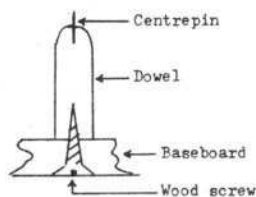
Figure 10.

THE BASEBOARD AND CENTREPIN

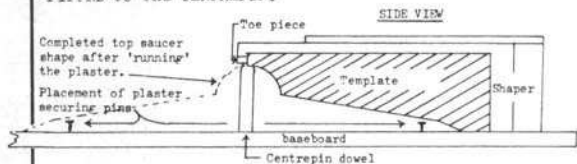


The centrepin dowel can also be glued into a pre-drilled hole in the centre of the baseboard.

Plaster securing pins - interlaced with string. Keep the heads of the pins well clear of the template's edge.



TOP VIEW OF THE SHAPER BASEBOARD WITH THE SHAPER FITTED TO THE CENTREPIN.



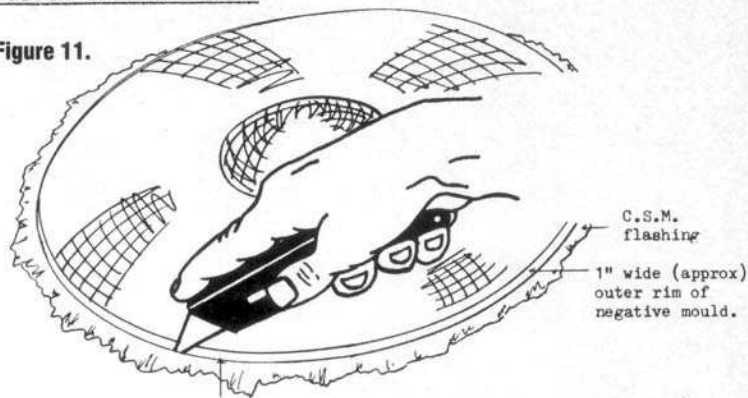
The centrepin dowel must be the exact length in height, so that the toe piece rests on the top of the dowel when positioned onto the centrepin. Assuming that you are right-handed and turning the shaper in a clockwise direction, then the template must be fitted to the left-hand side of the shaper as illustrated, so that the template pushes against the plaster.

Place the shaper on the baseboard and align the centrepin into the hole in the toe piece of the shaper. Now turn the shaper on the baseboard, keeping the back 'heel' of the shaper flat on the baseboard. This will allow you to get the feel of it before you run the plaster. On no account should you reverse the movement of the shaper. Keep the rotating action as smooth as possible.

ART A. SHARPLES

TRIMMING THE NEGATIVE MOULD

Figure 11.

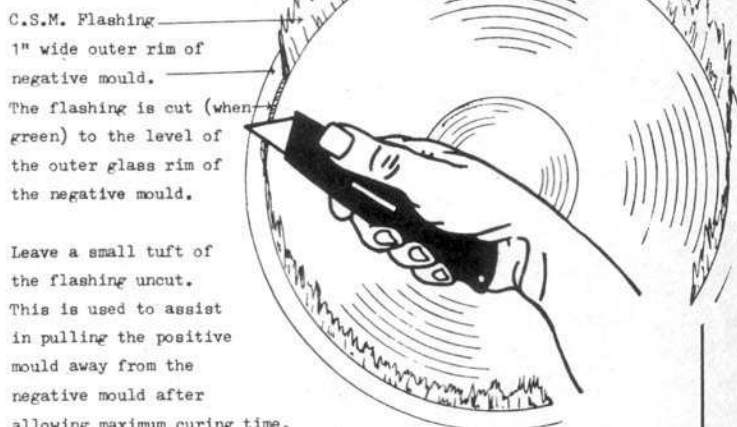


Draw a guide line 1" away from the edge of the mould and, whilst the glass is 'green', cut through along this line with a sturdy hobby knife. Peel off and discard the outer flashing.

Allow maximum curing time before separating the glass negative mould from the plaster cast.

TRIMMING THE POSITIVE MOULD

Figure 12.



THE NEGATIVE MOLDS

When dry, wax polish both plaster molds. Apply a heavy gel coat, again overlapping onto the baseboard. Follow with a layer of tissue. Allow to cure, and then build by C.S.M. to a thickness of at least 1/8-inch on both molds—not forgetting to overlap the C.S.M. onto the baseboard.

When 'green', cut off the flashing surrounding both molds on the baseboards. Cut this back to around 1 inch (see Figure 11).

After allowing maximum curing time, release the glass molds from the plaster. Wash out with hot, soapy water to remove the gel coat and any plaster remains.

Inspect the inner surface of the molds and run your fingertips around to feel that it is smooth and free from defects. Any minute pimples can be lightly sanded down with wetted 'wet and dry' paper.

POSITIVE MOLDS

The inner surfaces of both molds are now wax polished. A coat of release agent is applied to each inner mold surface, overlapping onto the rim surrounding each mold. Allow to set. Brush a liberal gel coat onto the release agent and allow this to cure.

Continue the glassing of the inner molds in the normal way, first with a tissue layer, followed by a build-up of the C.S.M. Do not allow either of these to overlap onto the outer rim of the negative molds. The tissue and C.S.M. should protrude past the rim.

When the glass is 'green', cut off the flashing level with the rim of the negative mold (see Figure 12). It is a good idea to leave an inch or so of the flashing on each of the molds. This gives something to grasp to pull out the inner molds when cured.

Again, allow maximum curing time. When cured, separation of the molds

will be eased by gently pulling back the tuft of flashing which was left on, and pouring boiling water into the seams between the molds. When separation is completed, carefully saw off the remaining tuft of flashing with a fine saw.

Now place the upper and lower halves of the saucer shells onto a level surface, such as a table top, to ensure that each mold is lying flat. Any protuberant areas can be carefully filed down. The two saucer shells can then be glued together with glass resin or an epoxy glue.

Apart from any minor filling, sanding down and painting, the saucer mold is now complete. Should you wish to fit either screw-in legs or support bars (for filming purposes), this can be done before gluing the two halves together. Holes are drilled in the predetermined areas of the saucer's hull to the diameter of the rods to be used. Behind each hole, a threaded nut is fiberglassed into place with C.S.M.

Designing your saucer with a removable dome would allow access to fit interior lighting (see Figure 13). This could be done using fiber optics. You could also drill portholes around the base of the saucer and fit a piece of colored gel behind them. Kenneth Walker's very novel light-flasher circuit, as featured in CINEMAGIC #3, could be used to create a rotating light effect behind the portholes.

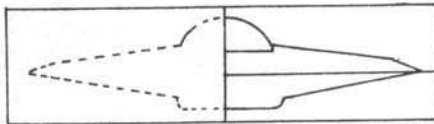
The removable dome on one of my saucers was sprayed matte white on the inside and the exterior sanded surface sprayed with clear gloss to show the natural underlying fiberglass. The effect is unusual and well worth trying.

The size of the shaper is dependent on the size and shape of the model you decide to build. The thickness of the layer of C.S.M. is also dependent on this. The size could vary from a subminiature to a three-foot model.

The methods and materials described in this article are intended to serve only as a guideline. With a little imagination, you can make a variety of futuristic models and props by using either of these techniques, or a combination of both. Imagination is the magical key word in all departments of special effects. We all require just that little spark to start the wheels of imagination into motion. That is what our magazine, CINEMAGIC, sets out to do. *CM*

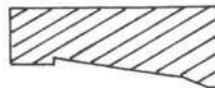
Figure 13.

DETACHABLE SAUCER DOME



SAUCER DRAWING

Compare with DIA.8

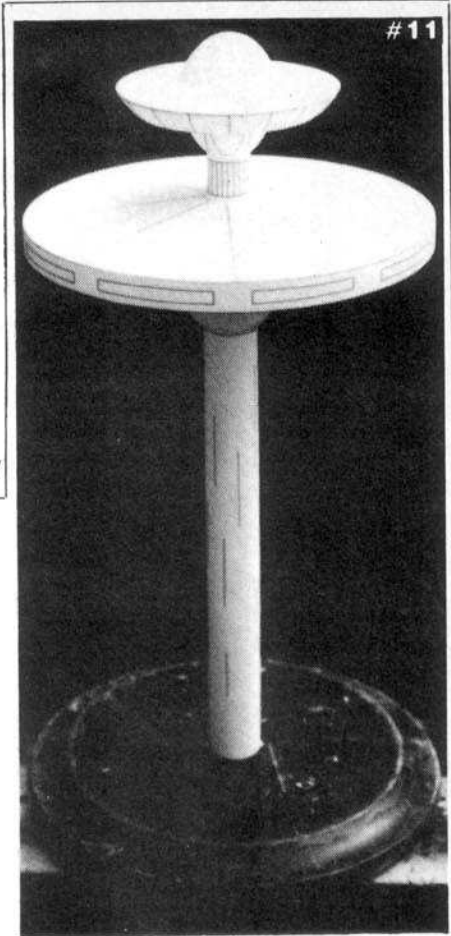


REVISED UPPER SAUCER TEMPLATE



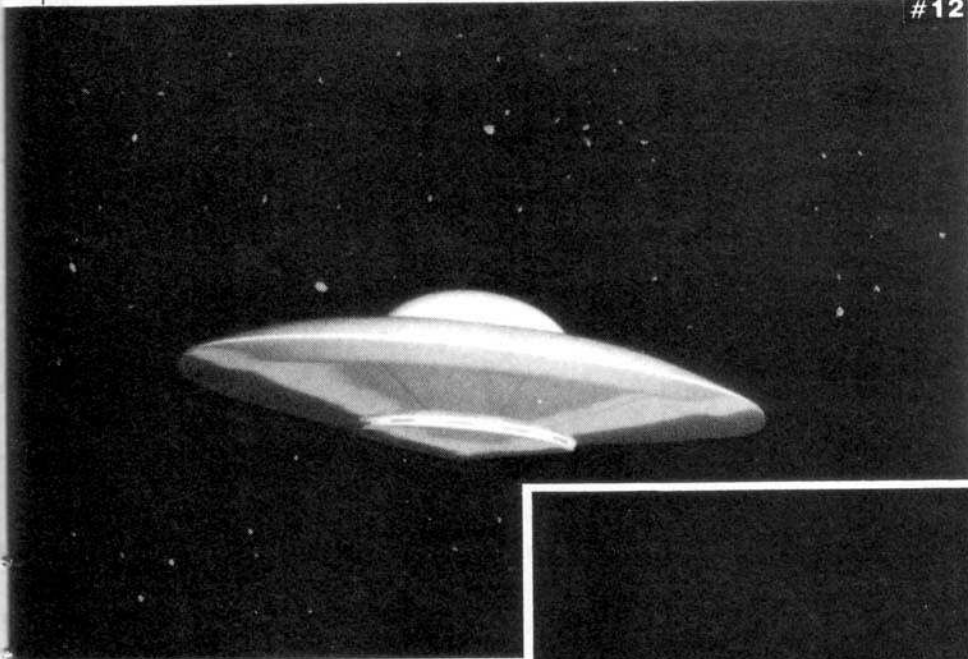
DOME TEMPLATE

When it is desirable to have access into the model saucer's interior, in order to fit lighting, etc., the drawing can be simply amended to allow for this. The template for shaping the bottom half of the saucer remains the same as illustrated in DIA.8

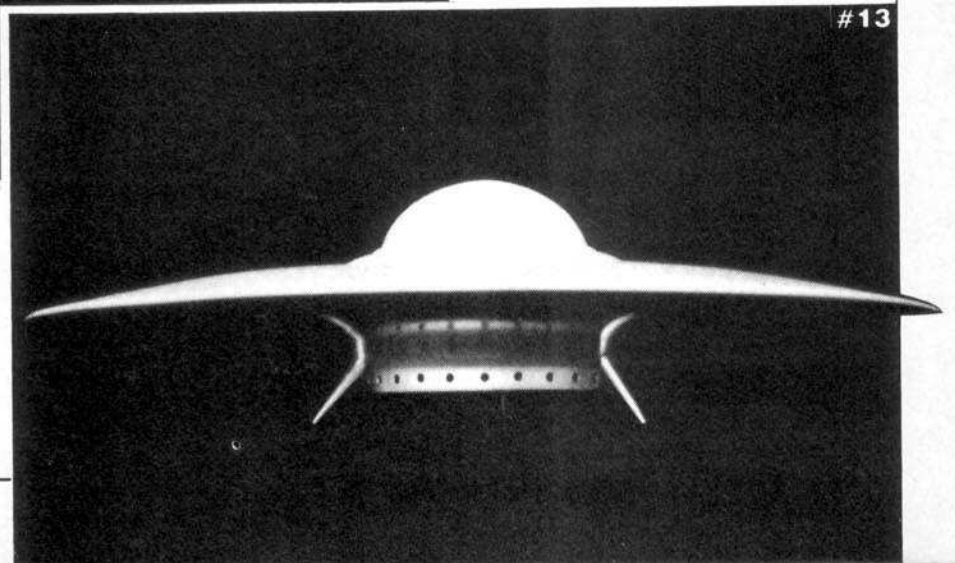


Above: The completed plaster tower. This tower was designed with a wide, thin turret to illustrate the versatility and strength of reinforced plaster. There is no need to make a fiberglass mold in order to create towers of this sort. Simple detailing was done with thin black adhesive tape.

Left: One of the saucers made by the method described in this article. Each half of the saucer is made separately and then the two halves are glued together.



Right: This saucer model features screw-in legs. Should you desire to fit either screw-in legs or support bars (for filming purposes), this can be done before gluing the two halves together by drilling holes and fiberglassing a threaded nut into place with C.S.M.



PROFILE

Deborah Von Moser: Video Artist

By JOHN CLAYTON

The video revolution is upon us. Many artists who would have chosen film as their medium in the past have turned to video in recent years for a number of reasons. CINEMAGIC is keeping up with the times by broadening its scope to include video as well as film production. This year's CINEMAGIC/SVA Short Film Search will have a special video category for those working in video instead of film.

Among the artists who have turned to video as a means of self expression is an important young video artist named Deborah Von Moser.

"I started creating visual stories by making animated Super-8 films, beginning when I was about sixteen," Deborah begins. "I worked with both cartoon and clay animation, using a Super-8 Bolex that my family owned. For some reason that I really can't explain, most of my early work with cartoon animation involved water stories—most of the characters were fish. I even made a film in high school as a class project that showed how water gets from a reservoir to your house. Each of the five animated Super-8 films I made in high school were about five minutes long and they each took an average of a month or two to make. Some of these early films had feminist themes, I was an ardent feminist at the time.

"I got interested in video in college," Deborah continues. "I got a job working in the school library at about the time when portable video equipment was brand new—back in the early seventies. The library bought a lot of video equipment—just to be in vogue and keep up with the times I guess—because no one else on the staff seemed to be interested in using it. The equipment just sat in unopened cartons until I decided to learn how to use it. I became fascinated with the immediacy of video. I automatically became the library's video person and working with the video equipment became the most important part of my job. I was studying communication arts and sciences in school at the time, but the television classes involved learning how to operate in a studio situation in the school's television studio. They weren't teaching anything about how to work with ENG (Electronic News Gathering) equipment at that time. (ENG is



Many visual artists are turning from the silver screen to the smaller video screen. Deborah Von Moser at the video editing facilities of Brooks Harris's Motor Video Corporation in New York City.

the term for portable video equipment.)

"After college I got a job at the Mercer Arts Center in Greenwich Village. They have a performance theatre called The Kitchen. I taped live arts performances of dancers and musicians. We taped people like The New York Dolls (a punk rock band), so I guess you could say that we were among the first people to make rock videos. Of course, back in the early seventies the equipment wasn't nearly as sophisticated as it is today. There weren't any portable color VCR's like they have today. We shot half-inch black & white reel-to-reel tape. It was even before video cassettes were introduced.

"The first tape I made at the Mercer Arts Center 'Kitchen' taught me a lot about how important content is as opposed to taping just for visual style," Deborah admits. "I made a tape of a group of Indian musicians that called themselves Vasant Rai. I took the original black-and-white video tape over to Dolphin Studios and colorized it with analog computer animation on their Rutt/Etra synthesizer. This was back in 1973, when Dolphin Studios was doing analog computer animation with for-

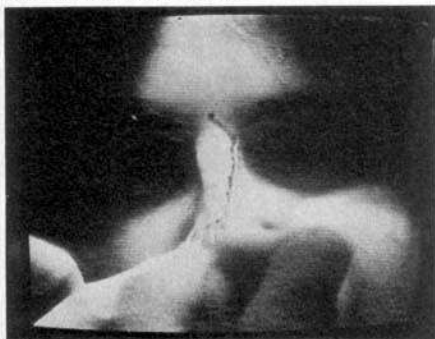
tran computer language. I went over to Dolphin very late at night after the studio was closed and spent the night adding all sorts of colorful twirling spirals and keyed computer animation effects to the black-and-white tape of the musicians. One of the engineers at Dolphin who was very interested in computer animation set up the fortran program for us so we could add the effects by turning a console of dials until we liked the results. I thought the musicians would love what we had done to their performance tape. They were horrified. They felt I had ruined their music.

"I really hadn't thought about the fact that I may have been using special effects just for their own sake and just because these analog computer animation effects were new and different, Deborah confesses. "As a result of that experience I started to make documentaries, because I became very involved with content as opposed to just making tapes that were just visually artistic. Of course I made sure that my documentary tapes looked and sounded good and were of professional quality, but I concerned myself more with the subject

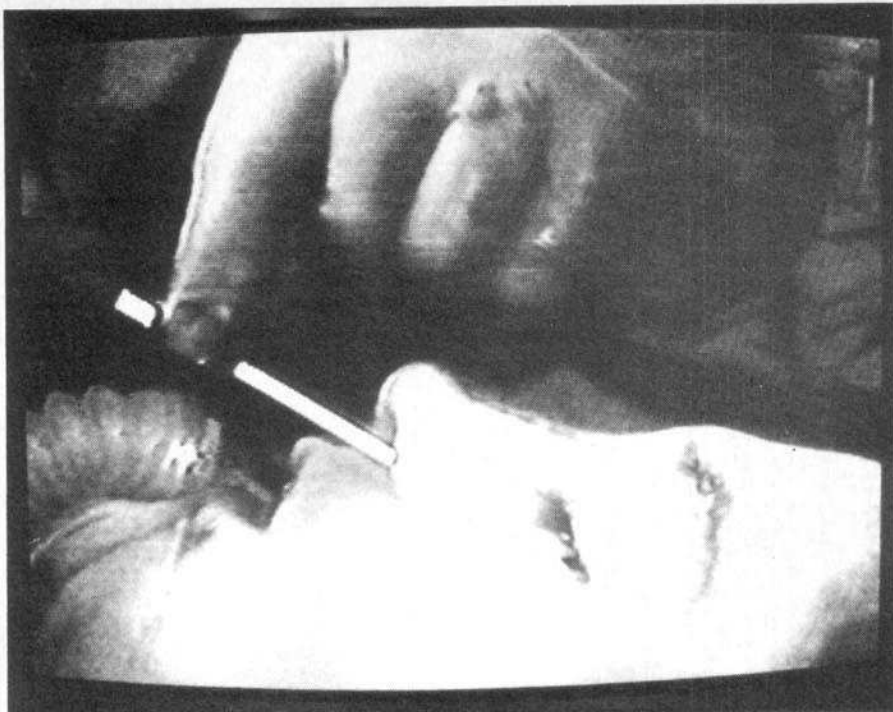
PHOTO INSET: JOHN CLAYTON; PHOTO COURTESY OF PANASONIC

matter than trying to experiment with computer animation or any of the other video special effects that were new at that time. One of the things that was so exciting to me when I became involved with video was that it was a brand new medium and you could become an instant expert. A young artist working in video at that time could be just as experienced in the medium as a much older artist, because all of the equipment was brand new.

"At about this time I became involved with a film student named Dimitri Devyatkin who was studying at the Moscow State Film Institute in Moscow," Deborah continues. "He had a portapack when he was a student over there and he managed to bring some of his tapes back with him. He developed some opportunities to go back to Russia and do more taping. I started working with him on the project and we raised some money with the help of Nam June Paik, who is considered the grand daddy of video artists. I became associate producer on the project, which was co-produced by Dimitri and Nam June. While we were developing the project, it became necessary to place a lot of phone calls to Moscow. I became convinced that we were being monitored by some American intelligence agency, probably the F.B.I. or the C.I.A. We had to call the operator and say we needed to place a call to Moscow and the operator would call back and tell us at which time that night that the call could be connected. I'm sure that American intelligence became very curious about our plans of bringing surveillance equipment—which all video equipment is—over to Russia and bringing video tapes back. We didn't have any trouble for about two years, but then our tapes were confiscated by customs at the end of a trip. We had to go down to customs at the World Trade Center with resumes, brochures and magazine articles to prove that we were video artists and that we were making a documentary and not involved in any kind of espionage. Once we had explained ourselves they gave us the tapes back, which was very fortunate because we could have been forced to wait six to nine months for the customs officials to view them.



A doctor plans how he is going to break his patient's nose in *Why Do Women Have Plastic Surgery*.



Why Do Women Have Plastic Surgery features graphic footage of a nose job operation. Here the surgeon prepares to break the patient's nose with a surgical instrument. This woman was interviewed before and after.

"The show we compiled was called *Moscow New York Shuttle*, because we juxtaposed scenes of everyday life in Moscow with scenes of everyday life in New York City. Although our budget didn't allow me to go and shoot in Moscow, I did a good deal of the New York shooting. The show was broadcast on the National Public Broadcasting System network (PBS) as part of their *Visa* series. There was a lot of abstract and computer imagery as well as live documentary footage in *Moscow New York Shuttle*. We also made another tape called *Do the Russians Want a War* in which we interviewed people in Gorky Park in Moscow and asked them if the Americans wanted a war and we asked people in Washington Square Park in New York City if the Russians wanted war. We found that most people felt that the other side wanted a war.

"In addition to being associate producer on *Moscow New York Shuttle* and helping get the project financed, collaborating on the script and working on all aspects of developing the project for two years, I also did the conceptual editing," Deborah confides. "The final cut was done on two-inch tape at the NET studios. (NET is the New York PBS affiliate.) I worked on *Moscow New York Shuttle* from 1975 to 1977.

"During that time I also made several of my own documentaries," Deborah continues. "I made a tape called *Shake* by walking down 42nd Street in New York City and interviewing all of the bizarre characters on the street. I talked to hookers, pimps, dope addicts and even little boys who were hustling middle-aged homosexuals so they could make spending money. I also made a

documentary called *Why Do Women Have Plastic Surgery* in which I interviewed women before and after they had nose jobs. There are some pretty graphic scenes in this tape showing a woman's nose being meticulously broken by a plastic surgeon. I also interviewed the plastic surgeon who performed the operations and asked him how he felt about altering peoples' looks and whether he thought cosmetic surgery was morally defensible. I also made a tape about a body building competition featuring Arnold Schwarzenegger and Lou Farigno.

"I was also an associate producer on another show co-produced by Dimitri Devyatkin and Nam June Paik that came out of our *Moscow New York Shuttle* work. The show was called *Russian Soul* and it featured reports on experimental educational techniques in Russia using psychic suggestion and it also featured a report on the work being done with Kirlian photography in the Soviet Union. We were invited to show *Russian Soul* at a seminar on Kirlian photography at the United Nations. I also acted as a production assistant on Nam June Paik's *You Can't Lick Stamps in China*, which shows what everyday life is like in the People's Republic of China.

"It's very important to get your work shown," Deborah stresses. "A tape I made using Brian Eno's music as a soundtrack (with his full permission, of course) and featuring computer enhanced color images of New York harbor was shown at the Museum of Modern Art in 1977. I've also had shows at The Kitchen, Global Village, Anthology Film Archives, the video section of the Berlin Film Festival, many other festi-

vals and several of the rock clubs in New York City. Showing your work can lead to new opportunities. A producer saw my *Shake* tape of the pimps and prostitutes on 42nd Street at a show at Anthology Film Archives and hired me to produce a tape called *Skateboard Lover*. I was flown to Los Angeles and spent five all-expenses-paid weeks making the tape, which featured skateboard champions performing their remarkable feats on a special course. The soundtrack of *Skateboard Lover* is a song of the same title that the record company that commissioned the tape was trying to promote. The tape was shown at skateboard conventions. It was a great experience.

"While *Skateboard Lover* was being shown at a skateboard convention while I was still in California, I happened upon another adventure that provided the subject for my next documentary," Deborah reveals. "I was walking through the parking lot of the convention center wearing a T-shirt showing an elephant on a skateboard and three guys ran up to me wanting to know where I got the T-shirt. As it happened, Ringling Bros. and Barnum and Bailey's Circus was set-up next door to the skateboard convention and the three guys who ran up to me were the elephant trainers. I exchanged a few T-shirts for a pass to get into the circus show and behind the scenes that night. They told me after the show that they were moving on to San Francisco the next night. On the spur of the moment I got the bright idea of asking them if I could go along with them, and they offered me a ride on the train. I came back the next night with a small suitcase and my black-and-

white portapack, which I had brought with me to California. (The other productions mentioned in this article except for those shot at The Kitchen were shot in color.) It turned out that the ride I had been offered on the train was in the stock car—with the elephants. A couple of mean-spirited girls who worked with the circus even told me stories about how the elephants had been known to push people out of the stock car with their trunks. I sat on the stock car for the entire 24 hour ride to San Francisco with 22 elephants. They did try to kick at me a few times because they could sense that I was afraid of them, but they were chained in place. The chains that were keeping the elephants from getting too close to me really weren't strong enough to hold them. It's a good thing that the elephants didn't know that!

"I ended up producing a short documentary on the elephant act and its trainer, Barbara Woodcock, whose family had been circus elephant trainers for five generations," Debra continues. "I was with the circus for six weeks, and by the time I left I knew all of the 22 elephants by name and had traveled all over the West Coast with them. I had to sell peanuts for the circus in order to be allowed to ride on the train with them because they required you to do something for them if you wanted to travel with them. Other people who were riding the train would make selling peanuts a full time job. As soon as they sold a tray of peanuts, they'd go get more. As soon as I had sold my first few bags of peanuts I ran and got my portapack and set-up to tape the show.

"When I got back to New York I did

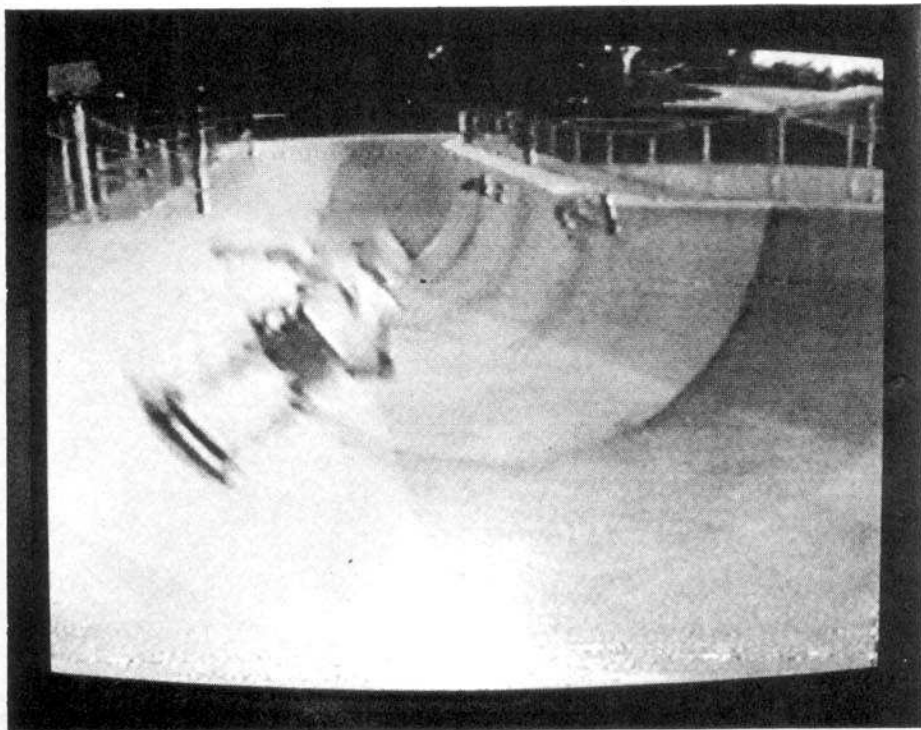


PHOTO: JOHN CLAYTON

Deborah Von Moser at Brooks Harris's Motor Video Corporation in New York City.

some freelance as a camera operator on some rock video shoots," Deborah remembers. "I shot Joan Jett, Meatloaf, The Waitresses, The Ray Beats and a few other groups. The rock videos I shot have been shown on the cable music station, MTV.

"I also worked for a year from 1980 to 1981 as curator of the video programming at the Mud Club, which is a rock club in New York. I set up the video system, showed my own work and got other artists to show their work. It was a lot of fun to have people come down late at night, have a few beers and watch videos with a good sound system and a great social atmosphere. I met a lot of interesting people during that period. It was the beginning of rock video and video in clubs and it was very new and different at that time, although now it's an expected part of the rock club scene. It was very successful at the time, the clientele was a Soho crowd and it became a very stimulating social scene. The difference between the Mud Club at that time and the other rock clubs was that I was able to get the artists a decent price for showing their work and the other clubs got away with giving the artist a pass to get in without paying admission and a couple of free drink tickets. The Mud Club doesn't even show videos anymore because it became too expensive a proposition for the owner. The other clubs still show video, and I've shown some of my work at Danceteria, but they don't want to pay very much. I make a point of insisting that I get paid for showing my work—even if it's only a token fee. This is my profession and I have to make a living at it. I've found that if you hold out, even the most reluctant exhibitor will come across with a small fee. The rock clubs have become a good forum for video artists, but there's no money in rock clubs for video artists—and there won't be in the future either. Most of the clubs try to get away with just showing the promo tapes supplied by the record companies, because



A scene from *Skateboard Lover*. Deborah was flown to L.A. and spent five weeks making the program.



Deborah interviews a young boy who sells his sexual favors to homosexuals in *Shake*. They don't have to pay to show those.

"I started to create computer animated logos for the New York rock clubs, but I found out that they didn't want to invest the money in that type of promotion. I created a computer animated logo for the Peppermint Lounge on the paint system of the Dubbner CBG (computer based graphics) system at Digital Effects in New York. I have gotten to know the people at Digital Effects very well over the past few years and they've been very kind in allowing me access to their Dubbner paint system at night—about midnight to six in the morning—when no one else is using the machine. The Dubbner is a very complex and expensive machine—it costs over \$100,000—so it isn't easy to get access to one. I want to concentrate on computer graphics at this point and I want to get more experience on the Dubbner. The Dubbner isn't "user friendly", which means that it's a very difficult machine to learn to control. It takes at least three to eight months just to learn how to begin to tap the potential of the graphics you can create on a Dubbner. I'm learning how to fully operate a Dubbner now and I feel that it's a direction I want to explore. The digital paint system on a Dubbner has about 260 different colors available in the program. It's called a palette because you can mix your own colors by mixing the

red, green and blue "tablets" on the color monitor. The paint system is based on a sensitized grid that you draw on with a stylus. The computer records the outlines you draw and fills them in with the colors you program into it.

"I'm presently working on producing a one-minute digital children's cartoon," Deborah continues. "It's about a heroine with supernatural powers who can blind her enemies with blasts of light. Most of the cartoon will be shot as cell animation on 35mm film and transferred to video, but parts of it—the light effects and titles—will be created entirely on the Dubbner paint system. I'm working with an illustrator named Joseph Nechvatal on this project. I'm hoping that I can turn the cartoon into a series for short spots on cable stations.

"I also edit video, and I may edit a David Johanson movie. David Johanson is the ex-leader of the punk rock group The New York Dolls, who has embarked upon a solo career. I've enjoyed working on the rock videos. The performers are generally very professional people and they're all fascinated with video now because rock videos have become such a vital force in the record industry that their careers may eventually depend on how well they can promote themselves with their video tapes. Everyone in the music industry wants to have a hit video on MTV.

"I've avoided taking a specific job in the television industry because you are forced to specialize and you become what you specialize in," Deborah confides. "I had a job for a while doing sound on the Mets games for WOR-TV in New York City, but I didn't want to be labeled as a sound engineer. I was also offered a job shooting for CBS News, but it would have been 60 hours a week of nothing but camera work and I wouldn't have had time to work on my own projects. I like producing my own tapes and working on all aspects of the production. I like being a jack of all



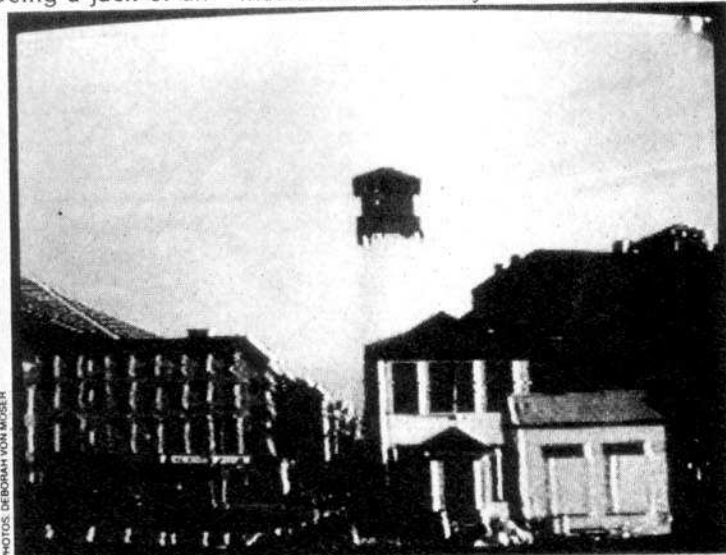
A hooker struts her stuff on 42nd St. in Deborah's video documentary, *Shake*.

trades when it comes to producing video tapes, and I feel confident on working with all aspects of production in the 3/4-inch format that I produce in. The larger formats require a higher degree of specialization, and I'd hire technicians to work with me if I were to shoot anything in one-inch or two-inch, but I haven't found it necessary yet. My emphasis now is on computer graphics created on a Dubbner and producing my digital video cartoon and hopefully getting it developed into a series. Even though it's basically a children's cartoon, but I think that the graphics and video effects will be exciting enough to entertain adults as well. I'm also currently being considered for a fellowship from the National Endowment for the Arts that would allow me to go and make videos in Japan for a year, and of course I'm hoping it comes through because it would be fantastic to be able to study the Japanese people and their culture and record my impressions on video. My advice to younger video artists and filmmakers is to work as hard as you can, produce as many programs as possible and get your work seen as often and in as many places as you can."

Whatever lies in store for Deborah Von Moser, one thing is certain: She will always be a serious artist with a firm commitment to her art—and her video medium is here to stay. CM



A helicopter that has been computer color enhanced takes off.



This scene from Deborah's video tape that featured the music of Brian Eno.

Filmmakers' FORUM

A regular department devoted to readers' comments about filmmaking, their problems and solutions.

Miniature Snow Base

... I'm producing a James Bond thriller. At the beginning of the film an entire United States post, located in Antarctica, gets destroyed by a deadly new Spectre bomb. I'm going to use a miniature snow base and miniature effects. Do you have any information on constructing a miniature snow base?

Steven Vigdor
20 Delano Ave.
Revere, MA 02151

... Try using baking soda for the miniature snow. Don't use flour because it's potentially explosive. Wear a filter mask so you don't breathe the baking soda dust. See "The Modelmaker's Handbook", published by A. Knopf, (reviewed in CINEMAGIC # 19) for information on constructing dioramas of snow scenes or see CINEMAGIC # 14 for Steve Sippin and Kevin Smyth's article, "Low Budget Devastation," about creating miniature city sets that appear to be ravaged by nuclear holocaust.

Posterization Alternative

... In CINEMAGIC #19 Michael Barkhausen wrote in to Filmmakers' Forum asking for an alternative to posterization. An alternative does exist. Simply shoot the scenes you want posterized in black & white and dye them. A variety of dyes and tints are available at most camera stores and this process will work in any format from 8mm to 65mm equally well. The only other things you'll need are a pan to dye the film in, a pair of rubber gloves and a place to hang the film while it dries. And there's no waiting for your film to come back from the lab, you can see your results in an hour or two. For further details on this procedure, look up the June 1978 issue of *Popular Photography* at your local library.

David Bliss
4125 Sequoia
Riverside, CA 92503

Michigan Makeup Man

... I'm a special effects makeup artist, but since I live in Michigan I have no way to use my skills. I can cast a life mask out of foam latex and I can also create a creature

with blood and movement. I'm 28 years old and for the past 15 years I've taught myself this craft. If there are any amateur filmmakers in the Michigan area who are making a film that requires the skills of a special effects makeup artist, please call or write me at the address below.

Joel Risberg
15376 Wilbur Ct. #71
Redford, MI 48239
(313) 538-1737

Mean E.T.

... I'm a Super-8 filmmaker who is trying to advance into the 16mm format, and I'd appreciate any suggestions from filmmakers who've made this transition.

I've currently started a 16mm film (to be shot on Tri-X) called *E.T. Comes to My Town*. It's not what you'd expect, unless you'd expect a cute little adorable E.T. to kill off my family quite gruesomely. For this, I'm seeking "gore makeup" advice such as that offered in CINEMAGIC #17.

So far, this film is scripted to include miniatures, matte paintings, lots of P.O.V. shots and some good gore. Lighting is also a major concern. If you have any suggestions, please write to me.

Tim Tyler
70 Ash St.
Lincoln, RI 02865

NPFS Film Competition

... The Northeastern Pennsylvania Filmmakers Society announces its Super-8 Amateur Film Competition. The competition is open to amateur filmmakers only and only Super-8 films will be accepted. The entry fee is \$6.00. All films must be sent in containers that are suitable for return shipment. Film cannot exceed 600 feet in length. You will be notified when your film(s) arrive. The deadline for entries is October 15, 1983. Films post-marked after this date will not be accepted. Please send films early for the judges' perusal. Sound films must be magnetic stripe, 1 or 2 tracks will be accepted. The Northeastern Pennsylvania Filmmakers' Society will not be held responsible for damage or loss

of films due to mail error or accident. The utmost care will be given to each and every film in our possession. Send a S.A.S.E. (number 10 size) to:

Northeastern Pennsylvania
Filmmakers' Society
P.O. Box 61
Ashley, PA 18706

New Film Club

... Attention filmmakers: Now forming a club for individuals with special interest in science fiction and special effects filmmaking. The club will be involved in all aspects of filmmaking—writing the story, scripting, set building, casting, directing, etc.

The goal is to produce a film made well enough to be sold to network or cable TV. This is a difficult goal, but with enough interested and hard working individuals this goal can be achieved. If you or someone you know is interested, please respond to the address below.

Archie Delapaz
6715 Marianne Dr.
Suitland, MD 20746
(301) 568-5914

TV Titles

... Here's an easy titling technique that's inexpensive and looks great. Take a piece of black construction paper and cut out the letters to the titles of your film. Throw away the cut out letters. Next, tape the piece of paper to your TV. Now adjust the vertical control, zoom in on the paper and film. The results are quite impressive. Good filming!

National Film
Correspondence Club
c/o Raymy Krumrei
3056 W. L-4
Lancaster, CA 93534

Backwinding Blues

... I have been trying to backwind for some time for multiple exposures. Is there anyway to backwind cartridge Super-8 film? All my previous attempts have been total failures.

Jim Hillaker
6191 Finch Lane
Flint, MI 48506
... There are two backwinding devices currently on the market for the sole purpose of backwinding Super-8. These are the EWA S8B Backwinder (available from Pioneer & Co., 216 Haddon Ave., Suite #522, Westmont, NJ

08108) and the Craven Backwinder (available from Halmar, Box 474 Lewiston, NY 14092). Both are fine products. See the article on backwinding Super-8 in CINEMAGIC #1. A review of the EWA S8B backwinder appears in CINEMAGIC #3. A review of the Craven backwinder appears in CINEMAGIC #18.

Computer Animation

... I'm interested in finding and communicating with people using computers for filmmaking. I used an Apple II to create titles, credits and special effects animation for spacecraft instrument displays in the CINEMAGIC/SVA award winning film, *Asteroid* (see CINEMAGIC #16). If you have an interest in computer animation and special effects for filmmaking, please write to me at the address below.

James Leatham
RD 2 Box 198 Laroe Rd.
Chester, NY 10918

Illinois Film Group

... I need help. One of the greatest problems of movie making is finding actors, actresses and technicians. If there is anyone in the Alton, Illinois area interested in acting or handling video equipment or lighting, please call me at (618) 259-0161 and ask for Randy.

Randy W. Riley
204 Tomlinson
East Alton, IL 62024

New Zealand Film Club

... I live in New Zealand and have an interest in special effects filmmaking, special effects makeup and modelmaking. If any other readers in New Zealand share these same interests please write, as none of my friends share these interests and I always have to work alone.

Andrew J. Cook
121 Caversham Valley Rd.
Dunedin
New Zealand

Address all correspondence to:
CINEMAGIC—Filmmakers'
Forum, c/o O'Quinn Studios, Inc.,
475 Park Ave. So., New York,
NY 10016

Due to the enormous volume of mail received, the editor regrets individual replies are impossible.

CINEMAGIC BACK ISSUES

#1—Backwinding Super-8 Film; Foreground Miniature Technique; Aerial Brace Construction



#2—Spaceship Model-making; Blood Makeup; Smoke Generator; Light Beam Effects; Making an SF Logo



#3—Robot Construction; Developing an Animation Style; Fluid Art Animation; Electronic Special Effects

#4—Aerial Image Optical Printer Construction; Wire Armatures; Rolling; More Electronic Special Effects; Fog and Mist Effects

#5—Aerial Image Optical Printer; Usage; Wide-screen Super-8; Slit Scan Effects; Gearing Eyes for Stop Motion Models



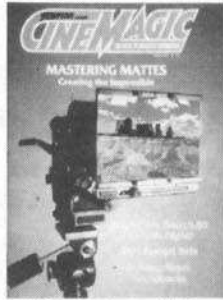
#6—Amazing Electronic Gadgets—Cheap; Bring Your Alien to Life—Latex Masks; Basic Editing Techniques; Invisible Man Effects

#7—Basic Cartoon Animation; Claymation; Kaleidoscope Effects; Profile: Santostephano

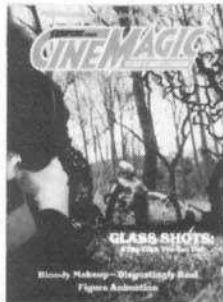


#8—Video Tape Transfers; Reverse Filming Effects; Lab Services; Profile: Vitous and Antonucci; Clash of the Titans Preview

#9—Animating Pogo; Lithographic Tinting Effects; Sets on a Shoestring; Profile: The Langley Punks



#10—Mastering Mattes; Zero Budget Sets; CINEMAGIC/SVA Awards Night; Building a Super Soundtrack; Pen Set Ball-and-Socket Armatures



#11—Glass Shots; Miniature Explosions; Figure Animation; Bloody Hair Hunks; Profile: Koch and Lohr



#12—Makeup Magic—Latex Appliances; Rotoscoping; Zero Budget Ray Gun; Profile: Barnes and Gilger



#13—Slit Scan; Creating UFO "Lightships"; Model Interiors; More Electronic Special Effects; The Saturn Machine; Profile: Borucki



#14—Storyboarding; Sound Effects Generator; Miniature Devastated Cities; Charles Jones' 16mm Space Epic; Profile: Jerry Parisi



#15—Script Writing; Miniature Lighting; Electronic Special Effects; Careers; Super Depth in Dioramas; Profile: Ralph Miller



#16—Scriptwriting, Part 2; Electronic Special Effects; LED Circuits; Flat Art Explosions; Careers; Frank Van der Veer; Build Your Own Camera Crane; Profile: Paady and Rudow



#17—Scriptwriting, Part 3; Production managing Low Budget; Electronic Special Effects; CINEMAGIC/SVA Contest Rules; Secrets of Graphic Gore; Profile: Callaghan and Griffith



#18—Making Monsters; Tie-Downs for Animation Models; Accessories for Filmmakers; Electronic Special Effects; Profile: Al Magliocchetti



#19—CINEMAGIC/SVA Awards Night; Build your own Cobweb Spinner; High School Werewolf; Careers; Georges Melies; Electronic Special Effects; Front Light/Back Light Animation Technique



#20—Articulated Full Head Masks; Dream Screen; Precision Ball-and-Socket Armature Parts; Electronic Special Effects; Profile: Joey Ahlbum

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Electronic SPECIAL FX

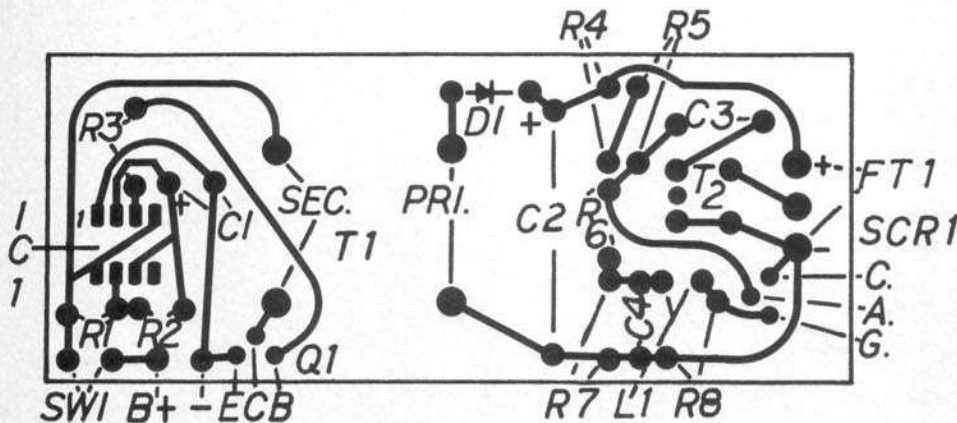
MORE STROBE SPECIAL EFFECTS

By CHRIS E. STEVENS



PHOTO: CHRIS E. STEVENS

The completed DC powered strobe unit is shown here connected to a nine volt battery. The voltage can vary from 6.3 volts to 12.6 volts. The rate of flashing can be changed slightly by changing the voltage.



BATTERY POWERED STROBE FLASHER FOR 6.3 TO 12.6 VDC OPERATION.

PC board layout—bottom view. Drill all black dots and pads.

I know I've responded to some of your letters letting you know that a suggestion for a project will be coming up in the next issue or so. Fear not, we will get to them sooner or later. It seems that every time I get off on a tangent, the road divides a few extra times for no particular reason, other than it seemed like a good idea at the time. Well, this is one of "those," and we've still got one more to go before we move on. If you recall, the last article was about a strobe with sync capabilities for movie cameras. This article will concern itself with a smaller (and less expensive) strobe unit that will run from a DC power source. Next issue, expect to find an accessory for the big unit, plus another goodie for movie cameras. Meanwhile, this unit can be useful for creating effects in its own right. Of course, how you use it is up to you.

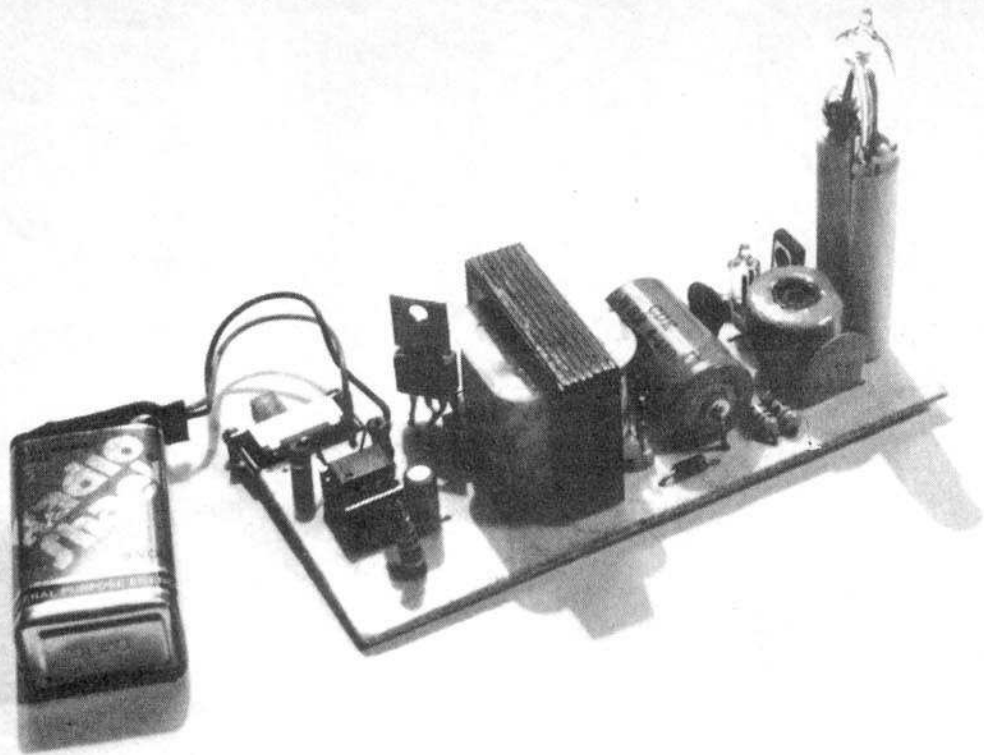
The strobe unit described here will fall in the \$15 dollar range, and is portable. It has a system that automatically flashes the unit at a predetermined rate, which is variable to some extent by changing the voltage. It will run from 6.3 VDC up to 12.6 VDC and will draw from 80 to 250 milliamps of current, depending on the voltage. So far, everyone who's seen the thing is drawn to its flashing, and it seems to have a hypnotic effect on those in its vicinity. I have to admit, it's caught me a few times too.

I can't take all the credit for this little item. A young man from my town, Chris Topa, brought it to my attention, as he needed something for extra credit in one of his classes. And, since we are on the topic of strobes, it seemed as though it would fit right in. I can think of many uses for this strobe, such as a highway safety flasher, or as an "attention getter" etc...

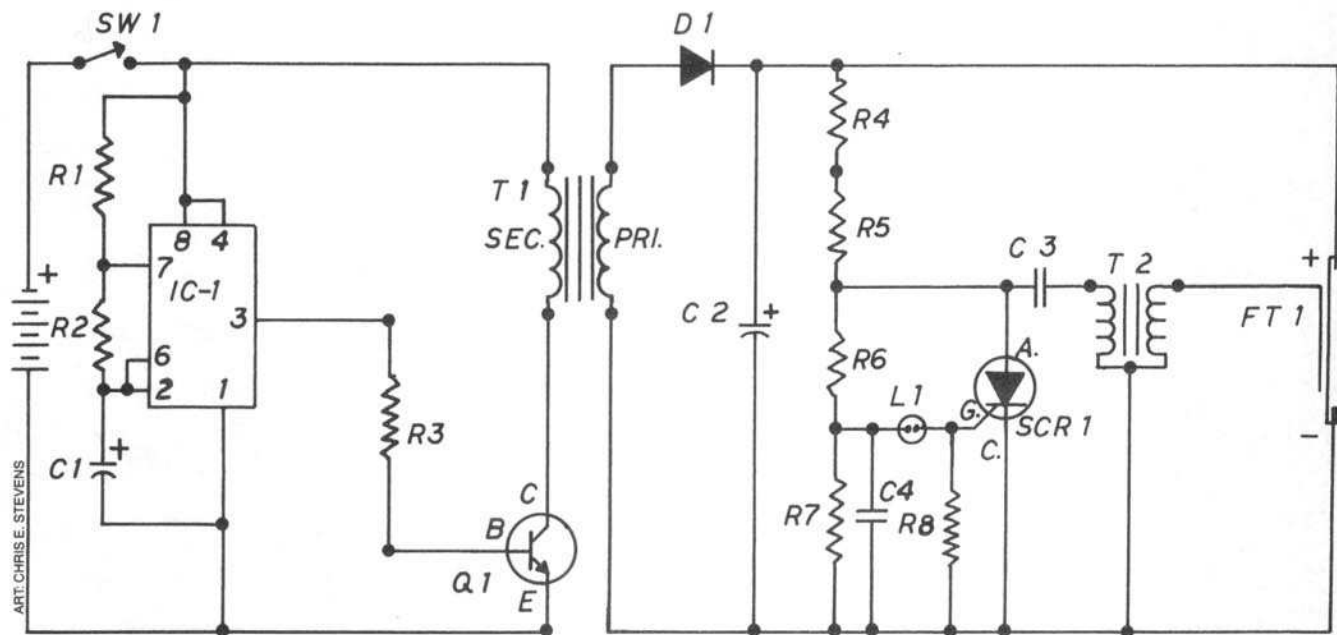
How it works, is rather straightforward. IC-1, which is a 555 timer, is used to drive transistor Q1 in the switching mode so that it creates a DC pulse in the transformer T-1. The transformer is connected in reverse so that it steps up the pulsed DC to a higher level. Basically, this is a DC to DC inverter circuit which will deliver about 270 volts when operated at 7.5 VDC input. The output from the transformer is passed through a rectifier diode which prevents the capacitor C-2 from discharging back through the transformer.

ART: CHRIS E. STEVENS

PHOTO: CHRIS E. STEVENS



Another view of the completed strobe unit. Note that the flash tube has some plastic sleeving. This helps support the tube and provides some insulation against arcing. The strobe unit should be mounted in a project box (plastic preferred) to protect against accidental shock. Even though C-2 is only 4 uf., it can deliver a nasty little shock to the unwary, should you accidentally come in contact with the secondary. Make sure you get the polarity correct when installing the flash tube.



A schematic diagram of the battery powered strobe unit. All resistors are 1/2 watt 10% tolerance.

Resistors R4, 5, 6 and 7 are voltage divider networks, giving us the proper trigger voltage and the operating voltage for the neon relaxation oscillator. Every time the oscillator fires, it passes enough current to trigger the SCR, which in turn fires the trigger transformer with the charge stored up in C-3.

Since a strobe is more of a voltage

discharge device than it is current operated, C-3 need not be of a larger value. However, you may use up to a .05 uf capacitor if you wish, as it should increase the brightness of the flashtube.

On the printed circuit board layout, drill *all* of the round black dots, and those for the IC as well.

Please also be aware that C-2, 3 and 4

are not available through your Radio Shack stores. You will probably be able to order them through a local distributor, parts outlet house or a local TV repair shop. If you can't get them, you can order them through me. The cost is \$7.95 for C-2, 3 and 4 which are high voltage units (450 volt and up) and are not in Radio Shack's normal inventory. I

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PARTS LIST

Sw-1	SPST switch	#275-401
R-1	680 ohm ½ watt resistor	271-021
R-2, 8	1 K-Ohm ½ watt resistor	271-023
R-3	3.3 K-Ohm ½ watt resistor (use two for a total of 6.6 K)	271-028
R-4,5	1 Meg-ohm ½ watt resistor	271-059
R-6	2.2 Meg-ohm ½ watt resistor	271-061
R-7	3.3 Meg-ohm ½ watt resistor (use a 2.2 and 1 meg. in series)	271-061/059
C-1	1 uf electrolytic capacitor	272-1419
C-2,3,4	See text.	*
(C-2 is a 4 uf electrolytic at 450 VDC. C-3 is a disc ceramic of .02 uf at 600 VDC and C-4 is a .005 at 600 VDC and also is a disc ceramic.)		
T-1	117 VAC primary, 6.3 volt secondary at 300 ma.	273-1384
Q-1	NPN transistor	276-2052
IC-1	555 Timer IC.	276-1723
L-1	Neon lamp (NE-2) (Do not use 2-H)	272-1101
SCR-1	6 amp, 400 volt Silicon controlled rectifier	276-1020
T-2	Trigger transformer	272-1146
Ft-1	Xenon flashtube	272-1145
D-1	Rectifier diode	276-1114

Misc. 3" x 6" printed circuit board, etchant, plastic tubing.

PARTS LIST: All items are available at your local **Radio Shack** store, except those marked with an asterisk (*). **Radio Shack** catalog numbers are listed in italic for your convenience.

try to use Radio Shack parts as much as possible, because they have stores all over the country and you can usually get what you need. On occasion however, we do get into things that are just out of their category and have to make use of other brands to get the job done. Again, if you *can't* find the parts, you can order them from me, care of CINEMAGIC. Please include a money order in the correct amount, and make sure that you state exactly what you need. Also, allow about 30 days for delivery. You can find the rest of the parts at your local Radio Shack stores.

Now, if you'll refer to the photographs, I'll try to explain a few things about why it's built as it is. First of all, you'll notice that R-3 is actually two (2) resistors connected in series. This is so the proper current level on the base of Q-1 is obtained. It comes out to an odd value, but if it is changed, there could be a major change in the output voltage which in turn, could cause damage to the unit. The resistor R-1 is a fixed instead of variable resistor, as the output voltage of T-1 is also dependent on the operating frequency. After some testing, the value for R-1 was chosen for the best overall performance with the variance in operating voltages, giving us a wider range for use. As the voltage is increased, the flash rate also increases. It will flash about once per second at 6.3 volts, and about once every half-second at 12.6 volts. The

flashtube has some plastic sleeving, which adds to the support of the tube, and also provides some insulation against arching.

I'd like to remind you, that even though the capacitor C-2 is only 4 uf., when it's charged, it can deliver a nasty little shock to the unwary, should you get your hands across the secondary. You might consider obtaining a project box (plastic preferred) and mount it in that for some added safety.

The trigger transformer T-2, can only be inserted in one direction. That is, if you drill *all* of the little dots. It has a discharge of about 4000 volts to the flashtube. And, for the flashtube, make sure that you get the polarity correct when installing it. The electrode that is the *largest*, is the *negative* electrode. Installing the tube backwards will shorten the tube life, and eventually give you a loss of performance. That's about all I can think of at the present time, other than remind you again that the output *can* deliver a nasty little shock if you come into contact with it: BE CAREFUL!

Let's hear from you! Send your comments and suggestions to me, in care of CINEMAGIC Magazine, 475 Park Avenue South, N.Y., NY, 10016. It takes a little time for the mail to be forwarded, so be patient. If you want a reply, be sure to enclose a S.A.S.E. I'll try to get back as soon as possible.

CREATING A MONSTER

By KEITH POHL



Dr. Frankenstein, left (Steve Hammer), is confronted by Frankenstein (Angelo Roman) in the North Hills High School (Pennsylvania) production of *Frankenstein*.
PHOTO: SALLY MAXSON

Our film teacher, Ralph Langer, came to see us one day and said, "How would you guys like to do a foam rubber mask for the school play, 'Frankenstein?'" Joe Carter and I jumped at the chance.

We were presented with our first challenge when we went to confer with the play's co-director, Mrs. Linda Brown. Mrs. Brown wanted an original Frankenstein monster. This was easily solved, for when

Joe went home that night he whipped up a few sketches. Mrs. Brown liked two of Joe's designs, so they were combined. Our first problem was solved.

The next step was to make a life mask of actor Angelo Roman, who was going to play the Frankenstein monster. We began by applying moulage on his face, keeping his nostrils open, followed by a layer of plaster bandages. When this negative mold was removed it was filled with more

plaster. After the process, Angelo said it was a relaxing experience which he would enjoy repeating. It also got rid of all facial blemishes. His skin was smooth for days.

We now had a plaster armature of Angelo from which we proceeded to sculpt the mask in clay. This step proceeded relatively quickly with the help of a drawing, although the mask was changed a bit in the process. A few finishing touches were added to the mask design

on the plaster positive—a scar on the forehead and the skin texture which was done with sandpaper.

A plaster negative was made of the clay sculpture by pouring plaster over it after putting Vaseline on all surfaces to be covered. When the mold was opened, the clay sculpture was removed and liquid foam rubber was poured in. The mold was then baked at 250° for 5 hours. After the first baking, the mold split. Because of the need to reglue the mold after every baking, we only got four good masks before the mold was damaged beyond repair. This is one of the problems with molding plaster vs stone plaster, but on our budget it was all we could afford. The plaster was sufficient for our needs and four masks were more than enough for one dress rehearsal and the three nights of the play. We used the first mask for the dress rehearsal and the best one for two of the three nights of the play.

Because we couldn't find a real wig to fit

what we wanted, and Angelo's real hair wouldn't do, we had to make our own wig. To do this, we first made a bald cap of latex rubber applied to a wig stand the shape of a head. We painted it black, and then attached layers of black hair from another wig using a paint brush and a little latex rubber. It worked perfectly.

The foam rubber mask just didn't seem to be enough. So, our teacher, Ralph Langer, sewed macrame cord to a sheet of sandpaper in the form of a scar. The sandpaper would give the latex rubber appliance a skin type texture. A negative plaster mold was then made and filled with latex rubber. Three scars were made, one for each wrist and one for the neck.

On the day of the dress rehearsal, Joe and I stayed after school to watch and help Mr. Langer demonstrate how to adhere and do the makeup on the mask. Joe and I paid close attention to the process; especially Joe, who would be applying the mask for two of the three performances,

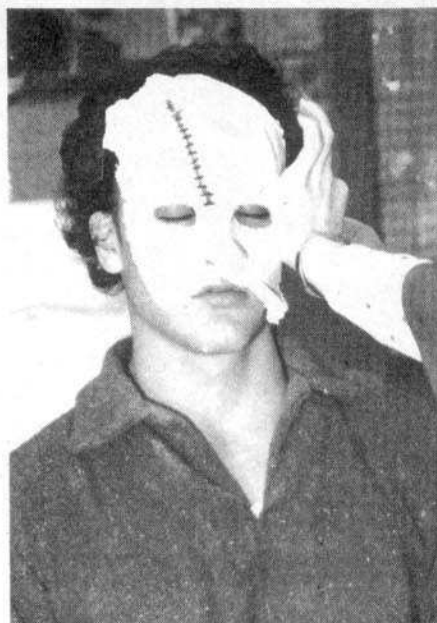


PHOTO: LEWIS RINAMAN

The foam rubber appliance is applied to Angelo's face. It still has many rough edges.



PHOTO: LEWIS RINAMAN

Actor Angelo Roman sans makeup. Note the bobbypins in hair to hold it back.



Angelo's hair is covered and he lies down in preparation for having a life cast taken.



PHOTO: RALPH LANGER

PHOTO: LEWIS RINAMAN

The rough edges are carefully blended in, using liquid latex and lots of loving care.

The completed Frankenstein monster makeup, including the latex scar appliances.



PHOTO: RALPH LANGER

Moulage is applied to Angelo's face to make a life cast. The nostrils must be kept open so the subject can breathe. Plaster bandages were placed over the moulage to complete the negative life cast.





The Frankenstein monster as seen in the North Hills High School production of Frankenstein.

because Mr. Langer couldn't be there the three nights of the play and I couldn't be there until after the opening curtain on two nights.

We adhered the mask to Angelo's face with spirit gum and covered the line with eyelash adhesive. Special casts of foam rubber makeup were used and then powdered to reduce the glossiness. For the dress rehearsal, we only used the neck scar. We saved the wrist scars for the play nights. When the wig was put on, it was pinned to Angelo's real hair through pre-punched holes. We took great care to hide the bobby pins so that they could not be seen even from close up.

On the first night of the play I did most of the work since I would only be there for touch-ups the other two nights and Joe would have to go it alone. He did have two assistants, but they had never done anything like this before.

Because the mask from the dress rehearsal was not salvagable, we used a different mask for the play. This mask was salvaged after each performance and used the next. At the end of the play, the mask was presented to Angelo. After adhering the mask, the scars were trimmed of all excess latex rubber, glued in place and colored with magic marker.

The wrist scars presented a problem on the first night. The spirit gum, which adhered them to the skin, did not hold the scars on all night. One of them fell off. For the second performance, Joe sewed the two ends of the scars together with black thread to make them resemble bracelets. The scars came off no more. Throughout all three nights of the play no other problems arose except that the mask had to be powdered between each act because Angelo was sweating.

After each performance, some of the audience stayed to see the characters. The little kids wouldn't come near Angelo. Some asked questions about the mask. All were amazed that we had accomplished a transformation which they had thought could only be done in the movies.

PHOTO: LEWIS RINAMAN

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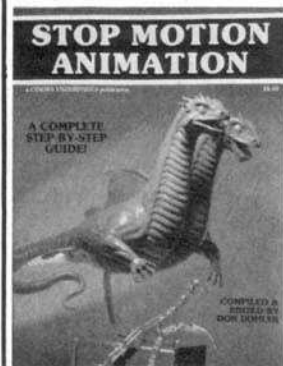
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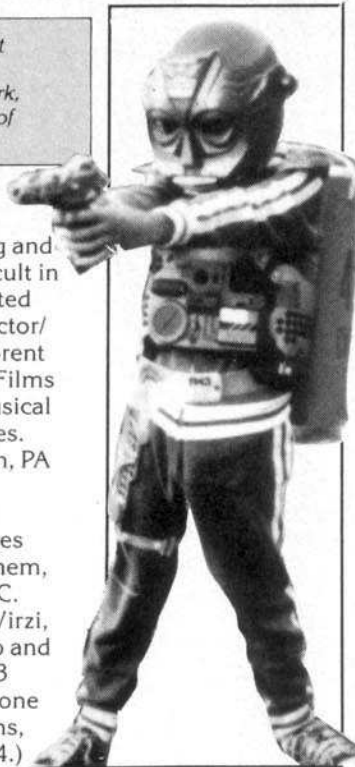
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BULLETIN BOARD

Please forward announcements of film projects in current production or near completion to CINEMAGIC, c/o O'Quinn Studios, Inc., 475 Park Avenue South, New York, NY 10016. Please include a photograph of some phase of the production if possible.

Ghost Fear. Drama. An old stone tower is the setting and catalyst for a conflict between the normal and the occult in which man's entire range of supernatural belief is pitted against a powerful and vengeful force. Producer/Director/Writer: Joe Frinzi. Cast: Heidi Call, Charles French, Brent Gearan, Bill Binczak and Mark Dietrich. A Sanctum Films Production. Super-8, color, silent with an original musical soundtrack by Guy Stauffer. Running time: 30 minutes. (Sanctum Films, c/o Joe Frinzi, 38 S. 12th St., Easton, PA 18042.)

Creepers. How can you hide from something that lives in your hiding places? They come when you ask for them, but they won't leave even if you scream. Producer: B.C. Films. Director/Writer: Bob Cappellatto. Cast: Scott Virzi, Eric Albert. Stop-motion animation: Bob Cappellatto and Scott Virzi. Final editing to be completed for the 1983 CINEMAGIC/SVA Short Film Search. Super-8, color, one track sound. Running time: 10-15 minutes. (B.C. Films, c/o Bob Cappellatto, 1133 Monks Ave., Peru, IL 61534.)



Starship TH3. Captain TH3 has been charged with the mission of exploring the planet Talos 4. He is attacked by Klingons and a space battle ensues. TH3's starship is a Coke can and the Klingons' ship is a 7-Up can. TH3 wins the battle and lands on Talos 4 for repairs. There he finds a Klingon base and he attacks. After doing battle with a couple of dinosaurs, he returns to space and does battle once more with a 7-Up can Klingon ship. He saves a damsel in distress on a beer can starship. This film is a parody of many different science fiction films and TV shows. Producers: Margherita Pasino & Sergio Squarotti. Director/Writer/Camera: Sergio Squarotti. Cast: Cristina Pozzan and Sandro Squarotti. FX include: Stop-motion animation, animated explosions (as seen in CINEMAGIC #16), animated lasers and dematerializing effects, miniatures and more. Super-8, color, lured sound. Running time: 15 minutes. (Sergio Squarotti, corso Antony n0 29, 10097 Collegno, Torino, Italy.)



Company "B" is Missing. A twilight Zone type of drama. During a war game through the forest, four army soldiers are somehow transported from the year 1959 to the year 2058. Spectacular battle scenes. Director/Writer: Michael Goulet, Producer: Peter Contreras. Camera: Gregory Gedney. Makeup: Rod Matsui. FX: Ken Newberry, Cast: Alfonso Zurita, Peter Contreras, Victor Montes and Gilbert Cendejas. FX include: explosions and bullet wound makeup effects. Super-8, color. Running time: 6 minutes. (Bizarre Productions, c/o Michael Goulet, 389 E. Riggan St., Monterey Park, CA 91754.)

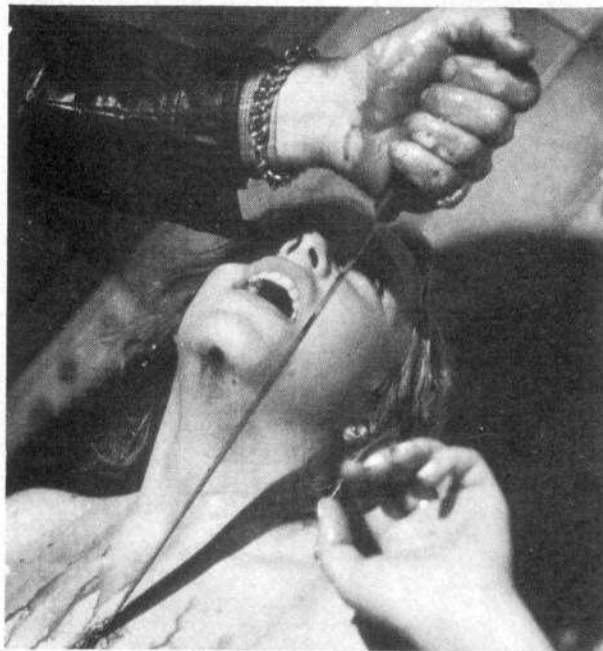
Johnny Flash Meets Captain Astro and His Nuclear Toilet Plunger.

A group of girls are terrorized by a strangely garbed man wielding a futuristic toilet plunger. Two girls are vaporized, but the third girl manages to contact Johnny Flash, who teleports to the rescue. After lengthy chases through forests, parking lots and playgrounds, the adventure ends with a laser sword duel between Johnny and Captain Astro. Producer: H.L.R. Productions. Director: Denis Langlois. FX: Denis Langlois. Running time: 9 minutes. Regular-8, color, music on separate tape. (H.L.R. Productions, c/o Denis Langlois, 651 Weston Dr., Ottawa, Ontario, Canada K1G-1V7.)

Teenage Bloodbath. What was supposed to be a friendly B.B. gun war between buddies turned out to be a field day for a psycho killer. Surprise comedy ending. Producer/Director/Editor: Todd Murphy. Cast: Kevin Costello, Brian Bartolini, Sean Briscoe, Todd Murphy, Craig Gallagher, Matt Cleary, Hugger Connelly, Andrew Grennie and Randal Bellantoni. FX include: explosions, fire effects, blood effects, sound effects and shadow effects. Super-8, color, sound. Running time: 10-15 minutes. (Murphy Productions, c/o Todd Murphy, 10 Nashville Rd. Ext., Bethel, CT 06801.)

The Soul-Gem of Ekystra. Four travelers searching for an all-powerful gem encounter monsters and a powerful sorceress in this dungeons and dragons type adventure. Producer/Director: Greg Wright. Writers: Curt Columbus, Greg Wright and Greg Hannon. Camera and FX: Greg Wright and Walter Fortner. Pyrotechnics: Greg Hannon. Cast: Greg Hannon, Bonnie Vosburg, Curt Columbus and Karen Cerroni. FX include: animation, explosions, makeup and gore. Running time: 15 minutes. (Empire Productions, c/o Greg Wright, 7 W. Hillcrest Ave., New Castle, PA 16105.)

Blodig Weekend (Bloody Weekend). A realistic horror tale in which a group of mixed-up people come to a grizzly end during a weekend of nasty plotting and assassination in central Copenhagen. Industrial espionage and a thirst for revenge are among the major plot elements. Producer: Halloween Film Productions. Director: Ken Raven. Script: Nicolas Barbano, Peter Kjaer & Ken Raven. Original music: Benni Le Fay. Makeup: Ken Raven. Cast: Brian Pedersen, Kim Hansen, Tommy Soerensen and Karina Henriksen. Super-8, color, sound. Running time: 20 minutes. (Halloween Film Productions, c/o Ken Raven, Blaagaardsgade 2A 4. tv., 2200 Kbh. N, Denmark.)

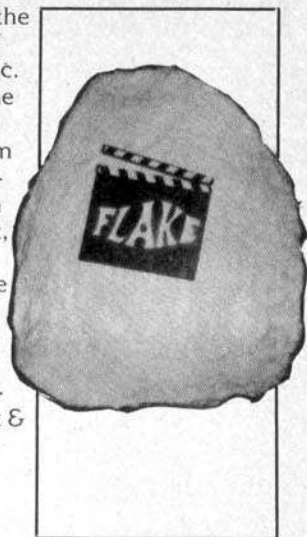


The Hitchhiker. A young woman picks up a hitchhiker and offers to drive him to the next town. On the way, she decides to stop in at her parents' house. Her parents invite her and the hitchhiker to stay for dinner. Shortly afterwards, members of the family are one by one being killed off by an unknown assailant. They discover too late that a psychotic killer has escaped from a nearby mental institution. Is it the hitchhiker who is responsible for the murders? Surprise ending. Producer/Director/Writer/FX: Larry Heffner. Special makeup effects: Larry Heffner and Richard Rotelli. FX include: bullet wounds, squibs, slit throats, dismemberments, stabbings and disembowlements. Super-8, color, sound. Running time: 15 minutes. (Dragon Film Studios, c/o Larry Heffner, 2501 Corning Ave. #1, Fort Washington, MD 20744.)

The Space Destroyer. An alien comes to the planet Avso and destroys the people. Only a handful of people survive to fight against the alien invader. Producer: PGP for Movie Star. Director: Paul Guncrles. Writers: Paul Guncrles and Maurice Kowalski. FX: Maurice Kowalski. Stop-motion: Paul Guncrles. Super-8, color, sound. May be filmed in anamorphic widescreen. Running time: 30 minutes. (Paul, Guncrles, 26 Tlenroy—Johann St., D-8000 Munich 60, West Germany.)

Deadly Silver. An adventure following the exploits of two young modern-day prospectors as they follow a trail of danger and suspense to the final resting place of the Deadly Silver. Producer/Director: John Peate. Writers: Wayne Peate and John Peate. Cast: Ralph DeNogean, Mark Braun, Paul Peate, FX include: makeup effects and stunts. Super-8, color, sound (narration, dialog and music). Running time: 25 minutes. (John Peate, 5951 East 18th St., Tucson, AZ 85711.)

Flake. Movie preview advertising the mythical film *Flake*. Killer dandruff is on the loose and killing the public. Monster flakes leave nothing but the clothes, as they devour everyone in sight. Producer/Director/Writer: Jim Taylor. Props: Charles May. FX: Vincent Garcia. Cast: Charles May, Jim Taylor, Mongo Coburn, Adam Hyatt, Nancy Krouse, Beth Taylor. Props include one three-foot-high and one eight-foot-high dandruff flake, and one puppet flake. FX include: stop-motion animation, rear projection, bi-pack rear projection, reverse motion and slow motion. 16mm, black & white, sound. Running time: 1 minute. (Daybreak Pictures, P.O. Box 3384, Reno NV 89505.)



Macho Squad. In Viet Nam, four buddies are killed in a chopper crash. Ten years later, on the hill where they are buried, their sons meet for the first time. Vowing to carry on that great American dream, they join together and become... "Macho Squad." A most unusual comedy. Lots of high falls and plenty of zany antics. Producer: Furulie Film Co., Ltd. Director: Larry W. Furulie. Camera: Marlyss Furulie. Cast: Dave Maurantonio, Kent McGee, Larry Furulie and Dan Maurantonio. Super-8, color, musical soundtrack. Running time: 20 minutes. (Furulie Film Co., Ltd., c/o Larry W. Furulie, 230 Nob Hill Terrace #3, Morgan, CA 95037.)

Battle Between the Wizards. Epic story of a young man's struggle to save his father's kingdom from an evil wizard. Producer: Banshee Films. Director: Lionel Smith. Camera: Mike Dean. FX: Randy Zastrow and David Petri. Music: Leonard Rosenmen. FX include: stop-motion animation, mattes, glass paintings, complex animation effects, foreground miniatures and much more. (Randy Zastrow, 901 Drake St., Denver, CO 80221.)

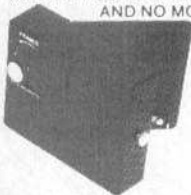
The Keys. Four teenage boys acquire mystical powers when they receive mysterious brass keys. The boys' plans to learn how to use the keys are delayed by a hooded creature who does his best to gain the keys for himself. An Epps-Clemmer production. Producer: David Epps, Co-Producer: Lee Clemer. Cast: Jim Ireland, Keith Meyer, Matt Miller, Lee Clemer. Editors: David Epps and Lee Clemer. FX include: a shooting fire effect, stop-motion animation, pyrotechnics. Caligraphic lettering for title sequence by David Strickland. Super-8 color, silent. Running-time: 20 minutes. (Epps-Clemer Productions, c/o David Epps, 3363 Jackson St., College Park, GA 30337.)

Bond is Back! J.B. in an action-packed movie trailer. Includes a fast paced chase on snow skis and underwater hand-to-hand combat. Producer/Director/FX: Randy Saba, Assistant Director/Still Photographer: Mike Jefferies. Cast: Scott Worrell, Sabrina Keating and eight others. FX include: animation, underwater photography and pyrotechnics. Super-8, color, separate sound (music and sound FX) on cassette. Running time: 10 minutes. To be shown at the Los Angeles Student Film Festival '84. (Randy Saba, 3000 Dona Emilia Dr., Studio City, CA 91604.)



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As a sync recorder, The MAG IV records on a special high quality stock cut 8mm wide and perforated with Super 8 or 16mm sprockets. Using this stock The MAG IV can synchronize its own running speed to the frame rate running speed of most motion picture cameras and projectors. The MAG IV is equipped with its own internal crystal, and can also be synchronized to any piece of equipment which provides a standard 60 cycle pilotone or one pulse per frame reference. Multiple track recorders or other sync recorders can be easily synchronized to the MAG IV.

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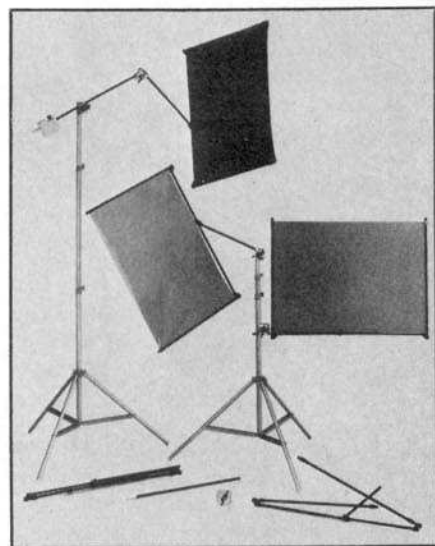
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special playback adaptors. The weight of the BetaMovie is less than 5 1/2 pounds, including the rechargeable battery. BetaMovie will be available during 1983.

Kodak Film Guides

Significantly revised and updated editions of two reference books on motion picture film are now available from Eastman Kodak Company.

"EASTMAN Professional Motion Picture Films" (H-1) and "Cinematographer's Field Guide—Motion Picture Camera Films" (H-2) both contain important new technical information for professional and amateur filmmakers, processing laboratory supervisors and technicians, film distributors, and librarians. Each book is designed to satisfy somewhat different requirements in today's film community.

The new "EASTMAN Professional Motion Picture Films" book will help film users select the most appropriate Eastman motion picture film for any particular job. It contains 120 pages of authoritative text, 66 line drawings, and 18 color and 54 black-and-white illustrations. An extensive glossary/index is also provided.

To help orient readers, the book opens with a short chapter that explains the "anatomy" of a film data sheet—an important first step toward correctly determining the best film choice for a specific situation. Virtually every characteristic of Eastman motion picture films is examined in depth, including exposure indices, exposure latitudes, incident-light illumination, lighting contrast ratios, reciprocity characteristics, filter ratios, and printing conditions. Also included are sensitometric and image-structure data, film base characteristics, storage and processing requirements, filtration needs, and sound recording and projection requirements. A final section describes film processing laboratories. The book's appen-

dices cover American National Standards Institute (ANSI) motion picture standards, major trade publications of interest to filmmakers, names and addresses of film associations, and more.

Produced as an attractive soft-cover volume, "EASTMAN Professional Motion Picture Films" makes a useful addition to any film user's library. Cover price is \$9.95.

"EASTMAN Professional Motion Picture Films" is complemented by the new fourth edition of "Cinematographer's Field Guide," which provides concise individual descriptions of the most popular 16 Kodak and Eastman motion picture films in a 102-page, 3 1/2 x 6-inch soft-cover book. In addition, the Guide has helpful tips on filters, illumination, film-can label terms, and how to order film from Kodak. Also included are ideas on forced processing, essential equipment and accessories for on-location production, and methods for extending the useful life of films, and other helpful hints.

This edition of the Guide highlights Eastman color high speed negative film 5293 and Eastman Ektachrome high speed daylight film 7251, and gives a current listing of international Kodak companies and distributors to contact for additional technical or ordering information. The book even includes a chart and detailed descriptions of the types of cores and spools currently in use for Kodak and Eastman motion picture films.

Both "EASTMAN Professional Motion Picture Films" and "Cinematographer's Field Guide" are available from dealers in Kodak audiovisual and motion picture equipment, and they can be ordered directly from Eastman Kodak Company, Department 454, 343 State Street, Rochester, N.Y. 14650. If ordering directly, include appropriate local tax and \$2.95 per order shipping charge. Prices are subject to change without notice. **CM**

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The New Merlins

The Post "Star Wars" Era Is Producing a New Breed of Wizards—the Movie Magicians.



PHOTOS: COURTESY OF ROBERT SHORT

A dream sequence from the film, *The Slayer* features a living severed head found in a bed. The makeup was created by Robert Short.

Legend tells us that the age of magic came abruptly to an end after the death of Merlin the Magician, sometime in the 6th Century A.D. Scientific reasoning and thought soon replaced the mystical rituals, spells and potions that bound together the medieval world.

However, *movie* magic is more imaginative than ever, and if the robed wizards of ancient times are gone, they are being replaced by a new breed of special effects, makeup and design experts who in many ways resemble their mystical ancestors. One of the most ubiquitous, and yet basically a behind-the-scenes person, is Robert Short, a Los Angeles native who recently completed work on such magical films as Steven Spielberg's *E.T.*, Clint Eastwood's *Firefox*, and two horror films, *The Slayer* and *Timewalker*.

Not only does he design and implement special effects, strange makeup appliances and minatures, but Short is also a writer who has contributed to several recent horror films, including Wil-

liam Malone's critically acclaimed *Scared to Death*. When he isn't on the set, the young magician spends time in his workshop at home tinkering. Recently he designed a Yoda hand puppet for a friend, which so impressed marketing experts at Lucasfilm, that they quickly bought the concept from him, turning an innocent gift into a merchandizing bonanza. It is only a brief magical moment in the career of a hard working young man whose dreams and nightmares have propelled his career.

Short, 31, grew up in Malibu, California, the son of a real estate agent. He attended Santa Monica College in 1970, majoring in Theater Arts, and maintaining strong acting ambitions. Instead, he found himself taking over as prop master during some local college productions, and his ability behind the scenes soon led him down an entirely different path.

In early 1974 he wandered into Don Post Studios in Glendale, a major fantasy factory of masks, special effects and

makeup, and entered a world that would forever fascinate him. Working with designer Bill Malone, he began to sculpt and paint miniature spiders, sharks (for *Orca*), and other strange creatures which were featured in a number of films of the period. When Malone bought the rights to Robby the Robot, the famous automaton from *Forbidden Planet*, Short signed on as the human who operated the machine. Appearances in such shows as *Ark II*, *Space Academy*, *Wonder Woman*, and *Mork and MIndy* followed, somewhat satiating his acting ambitions. But the magic of special effects soon superseded any dying acting aspirations, and, beginning in 1976, he began to operate as a freelance designer and makeup specialist in partnership with a young Chris Walas (who went on to do *Raiders of the Lost Ark* and *Revenge of the Jedi*).

Together they worked long hours on Joe Dante's *Piranha*, designing all the underwater blood effects (filmed in the Los Angeles Olympic Swimming Pool

which was covered with canvas to simulate the Amazon basin). With enthusiasm and a keen eye for realism, Short was beginning to create wonderful appliances that attracted the attention of other special-effects experts and directors. That exposure netted him an association with model maker Greg Jein on such special-effects spectacles as *The Special Edition of the Close Encounters of the Third Kind, 1941*, and *Star Trek: The Motion Picture*.

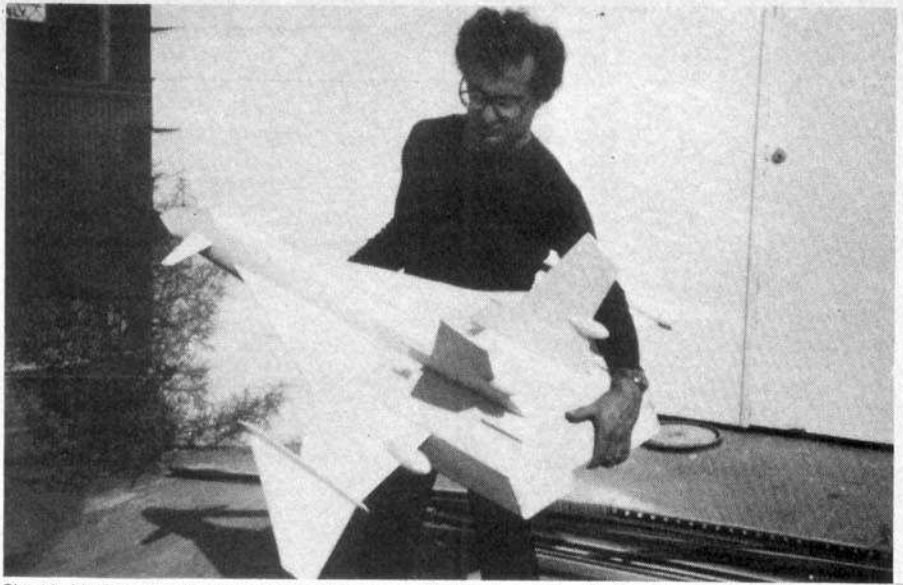
Whether it was designing new versions of the aliens from *Close Encounters* (to be seen by actor Richard Dreyfuss when he entered the mother ship), or building radio-controlled automobiles used on a busy Hollywood Boulevard in Steven Spielberg's pre-WW II farce, *1941*, Short brought to his work a willingness to create from scratch. Like many special effects designers, Short felt that there should be no limitations on his imagination. With this type of attitude, he was often moved up in the ranks to act as troubleshooter on particularly difficult effects sequences. With a good mechanical knowledge, and a strong artistic ability (he is a marvelous sketch artist), Short began to work in more responsible positions, so that eventually, in a work area that was swarming with technicians and assistants, his work began to stand out.

"I've always worked freelance," says Short. "In this business, that can be an advantage or a disadvantage. In my case, there have been times when I haven't worked, but when that happens, I just go back into the workshop to cook up something new like the Yoda hand puppet, or write a new script. You learn to treasure those moments of independence, for when you're working on a studio job, there is never any free time. Special effects people are used to working around the clock to finish a job. Sometimes you seem to forget about time altogether. The creative process is that intense."

Following his work with Doug Trumbull on *Star Trek: The Motion Picture*, Short worked on the soon to be released *Virus*; supervising the construction of two miniature nuclear submarines for Greg Jein. At the same time, he was hired by Lucasfilm as a costume repairman, maintaining such battle-hardened veterans as C-3PO and R2-D2 which would go on to *Return of the Jedi*.

On the horror film *Alligator*, Short went back to designing blood effects and appliances, spending much of his time in a dank run-off drain in Central Los Angeles, where the film crew was creating the final escapades of a giant reptile loose under the city. In one sequence, Short had to fill the 25-foot creature with artificial guts, all of which was blown to hell in the terrifying finale.

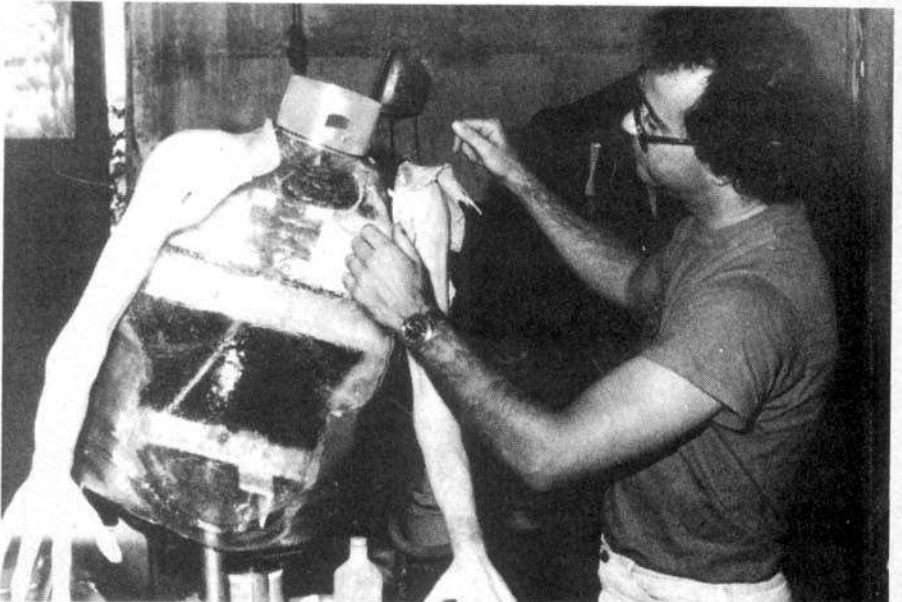
How does working with blood and gore affect the average makeup magician? Says Short, "It begins to get to you. You lead a bizarre existence, and you can put up with just so many jokes about your



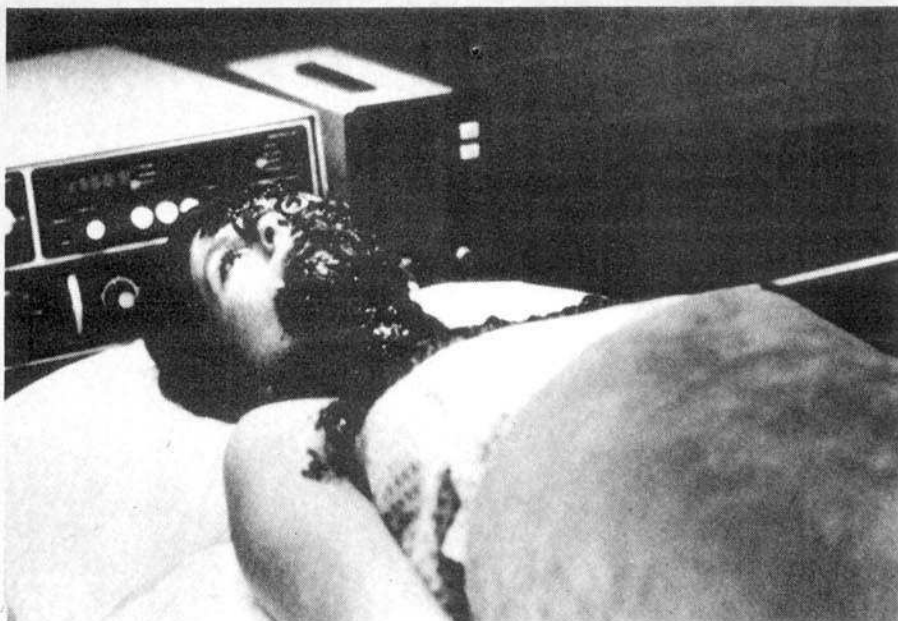
Short holds the prototype of the firefox plane for the Clint Eastwood film, *Firefox*. The model was designed by miniature master Greg Jein. Short supervised the construction of the 5 1/2 foot long motion control model.



A scene from *Galaxy of Terror* showing one of the weapons that Short designed for the film.



Short attaches the arms to the E.T. heartlight chest that was used to create the lovable alien's glowing heart in Steven Spielberg's blockbuster film, *E.T.* Short has contributed his talents to many famous science fiction films.



A victim of the mummy fungus in the film, *Timewalker*. The makeup was created by Robert Short. Short says that he is fed up with blood and gore makeup assignments and would rather concentrate on creating other types of effects.



Short and makeup girl Sue Dolph apply a gelatin coating to the face of the actress who plays one of the victims of the mummy fungus in *Timewalker*. The full effect as seen in the film is shown in the top photo on this page.

work. After *Alligator*, I was really fed up with blood and gore, but the clincher occurred after our wrap party when I climbed into my car and accidentally drove over a live rat which splattered all over my car. I knew then that I was due for a breather."

Tinkering in his workshop in Santa Monica, Short decided to make a gift for a friend who was a big fan of *Star Wars*. Working with some of his own materials, he designed a Yoda hand puppet. Short brought the puppet to work at Lucasfilm. The marketing people saw the toy, and eventually bought the concept, working out a merchandizing deal with Kenner Toy Company; a windfall that nets Short a

yearly royalty.

"It's like having a hit single," he smiles. "It was such a fluke thing. Here they have hundreds of people racking their brains for merchandizing tie-ins (and they come up with hundreds of ideas) and I walk in with this simple little puppet. It often works that way, I guess."

Short began 1981 on a small island off the coast of Georgia, working on the fantasy horror film, *The Slayer*, where he designed and articulated a "nightmare that comes to life." One funny story concerned his search for worms that would eventually cover the rotted walking corpse. Unfortunately, worms were out of season, the water being too cold for them

to be used as effective bait (they would quickly freeze to death). So Short had to make the rounds looking for any supplies that could be had. In tie and business suit, he marched into one typically Southern rural fish-and-game store, and asked for worms.

"Going fishin,'" said one of the local denizens, as he giggled to his equally amused friends. Short kept a straight face and accepted a large container filled with worms. As he left the store, he could hear them mumbering about one more suckered Yankee biting the dust. Just another day in the life of a movie magician.

When Greg Jein, while working with Zoetrope Studios for *One From the Heart*, received the contract to design the Firefox jet for the new Clint Eastwood thriller, *Firefox*, he contacted Short to supervise the construction of the miniature plane. Short created a 5½-foot by 3-foot motion control model. The final prototype was then turned over to John Dykstra's Apogee Company which utilized the working fighter in all special effects sequences.

"The Firefox," explains Short, "as designed by Greg, is a combination of the MIG-23 (codenamed "Foxbat") and a Japanese cartoon. It all works though, thanks to an amazingly detailed skin which incorporates tin foil molded onto the plane's appropriate superstructure, and a new type of epoxy."

After Greg left the Firefox on Dykstra's runway, Short took his bag of tricks in hand and joined the staff of a television pilot entitled *Nuts and Bolts*, where he became the special art director in charge of designing three robot characters. Using his *Star Wars* knowledge, Short realized the importance of giving the automatons character as well as design efficiency. Given a free hand in terms of comedy, the resourceful art director created an old, obsolete transistorized robot; a sleek modern version complete with English Gentleman's outfit, and a thinking, blinking vacuum cleaner type machine that steals the show.

Everything worked admirably, however, despite good ratings, ABC never picked up the pilot for a series, an event that still mystifies Short.

Turning to writing, Short, with associate Danny Biederman, spent much of 1981 attempting to sell MGM a new update version of the popular *Man From Uncle* television series as a feature film. With his good friend Bill Malone, Short developed two new fantasy film concepts, one for an updated Mummy film, the other a horrifying "creature film," *Deadly Image*. He also completed the finishing touches on a martial arts saga, titled *Spectre*, which is currently under consideration at several studios.

Last Fall, he was called in to join special effects expert Carlo Rambaldi on Steven Spielberg's top secret project. Short was to create unique body appliances that allow the audience to see the alien's internal organs, especially the heart which

PHOTOS: COURTESY OF ROBERT SHORT

glows during emotional sequences.

"It was a heart light," he explains, "which glows from within the alien showing us the warmth and unity of the galaxy he comes from."

The immediate problems were obvious. Seeing an alien organ, whether it glowed or not, could be disgusting, especially if it was pulsating in close-up. Spielberg wanted nothing of the kind, so Short, working closely with visual effects coordinator Mitch Suskin, began designing at high speed, wary of production deadlines that were approaching.

Troubleshooting his way, Short created a clear, vacuum-formed replica of the creature's body in which he placed the glowing, pulsating organs, emphasizing the heart. Carefully painting the organs to guarantee their realism, Short brought the device to life for the cameras, winning the approval of Spielberg and the crew.

Short also created an alien horticulture which is utilized as a Galactic Museum by the inquisitive alien creature. The ship itself was designed by Ralph McQuarrie, conceptual artist for the *Star Wars* films, while the greenhouse interior was designed by Jim Bissell, the show's art director. Look closely at the alien garden, and you will probably recognize a famous plant of science fiction history—a Triffid.

"There always has to be an in-joke in the film," says Short, "it's up to the audience to spot it."

Back in his garage in Santa Monica, Short has spent a great deal of time restoring the *Man from Uncle* car. The sophisticated auto, once featured in the popular spy series, was lying in so many pieces on a garage floor in Parker, Colorado, when Short scooped it all up, and shipped it back to his own mechanical workshop in California.

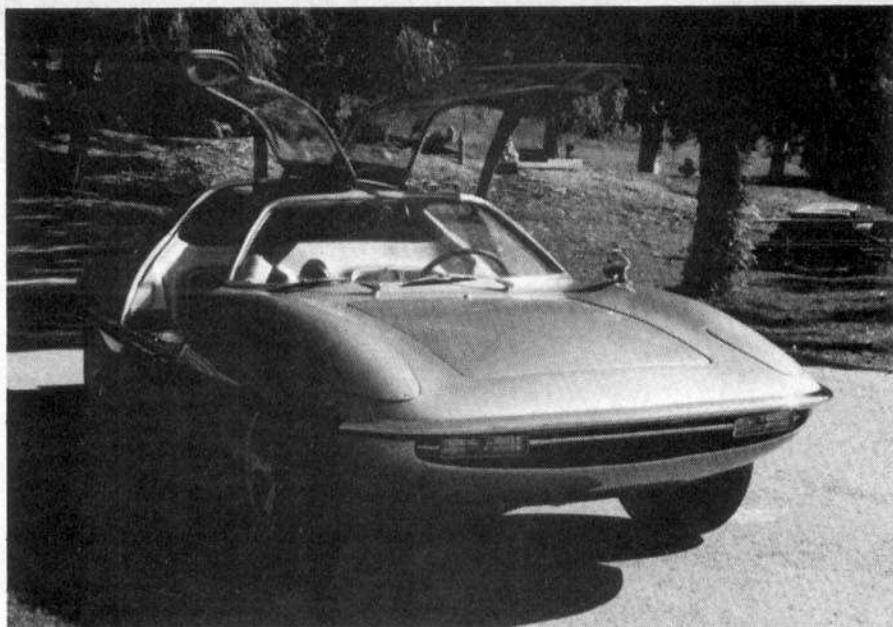
The one-of-a-kind vehicle remained in his garage for a short time. Within weeks, he was already test driving the low slung sports car, and at this writing, the vehicle is in mint condition, joining his stable of classic cars which includes a 1964 Silver Aston Martin DB-5 (similar to the car driven by 007 in *Goldfinger*).

As to his current address, even Merlin would have been proud of Short's cluttered two story apartment wedged innocuously between the giant structures of the Santa Monica Hospital Complex and various local businesses that have replaced all other residential buildings in the area.

In this cave, perched on the edge of humanity, Short continues to create movie magic. Whether it is a wonderfully imaginative hand puppet, or a blood strewn corpse, Short is one of the few modern magicians who have, in their own way, preserved the skills of that once great mystic who prowled the forests of England, casting spells left and right. Would Merlin have survived in the modern world?

Says Short, in all seriousness, "Are you kidding, he'd be under contract in a second!"

CM



The U.N.C.L.E. car that Short restored in his garage in his spare time after buying the car in pieces from a man in Colorado. Now fully restored, the car gets Short to his assignments around Hollywood.



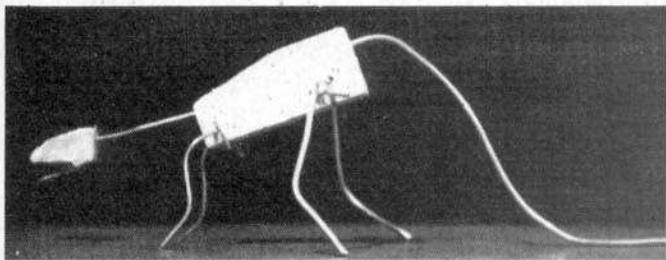
PHOTOS: COURTESY OF ROBERT SHORT

Short poses with the three robot characters he created for a television pilot entitled *Nuts and Bolts*. Short served as the special art director in charge of creating the robot characters. The pilot never became a series.

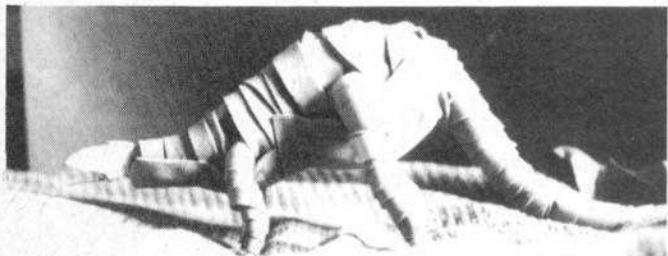
Dinosaurs: From the Inside Out!

An easy alternative to full body casting.

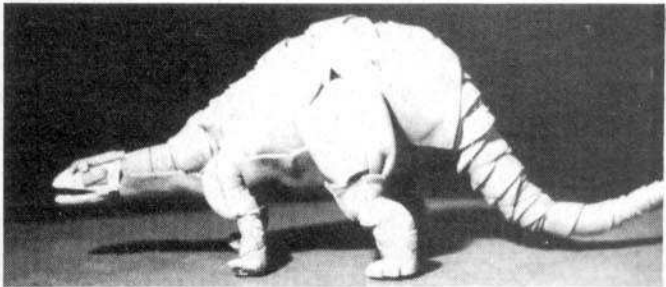
By KENNETH BRILLIANT



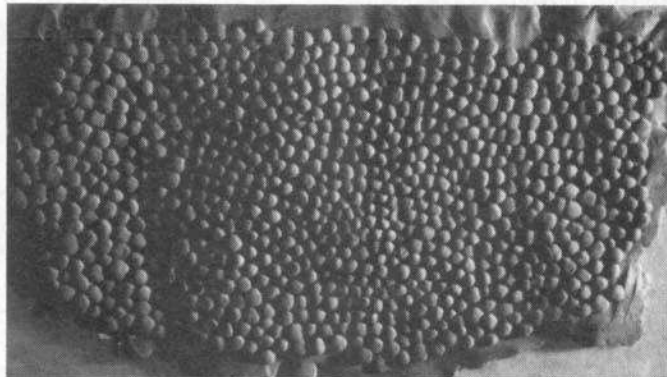
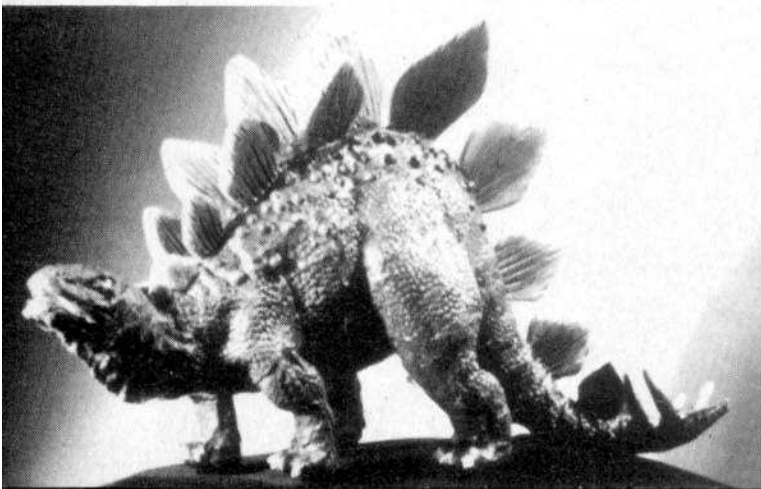
▲ 1. The stegosaurus armature. The body and head are balsa wood and the limbs are armature wire.



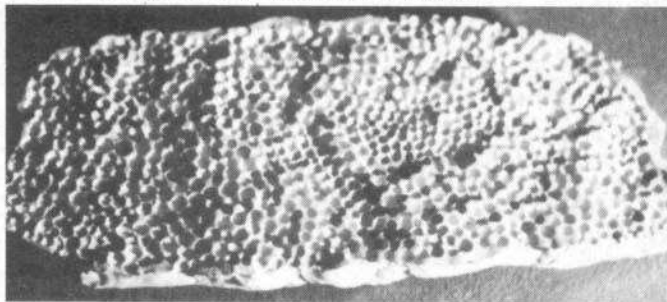
▲ 2-3. The build-up process begins. Thin strips of foam rubber are wrapped around the armature and glued in place with liquid latex. Larger foam sheets are used for the body.



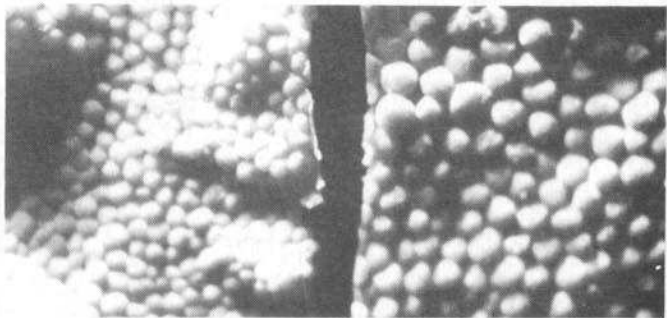
▲ 4. By stretching and gluing different size pieces of foam rubber onto the model, the muscles are formed. During this stage, much experimentation is needed to get the desired muscular effect.



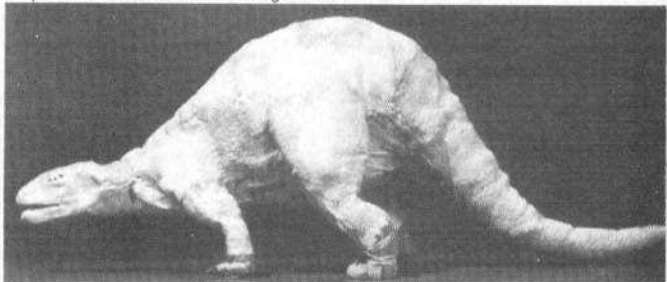
▲ 5. To make the skin texture, small balls of plastilina clay are flattened onto a piece of plexiglass. Once the sculpture is complete, a clay wall is built up around the edges to contain the hydrocal for the mold.



▲ 6. After the hydrocal has dried, gently pry it away from the sculpture and clean out any remaining clay.



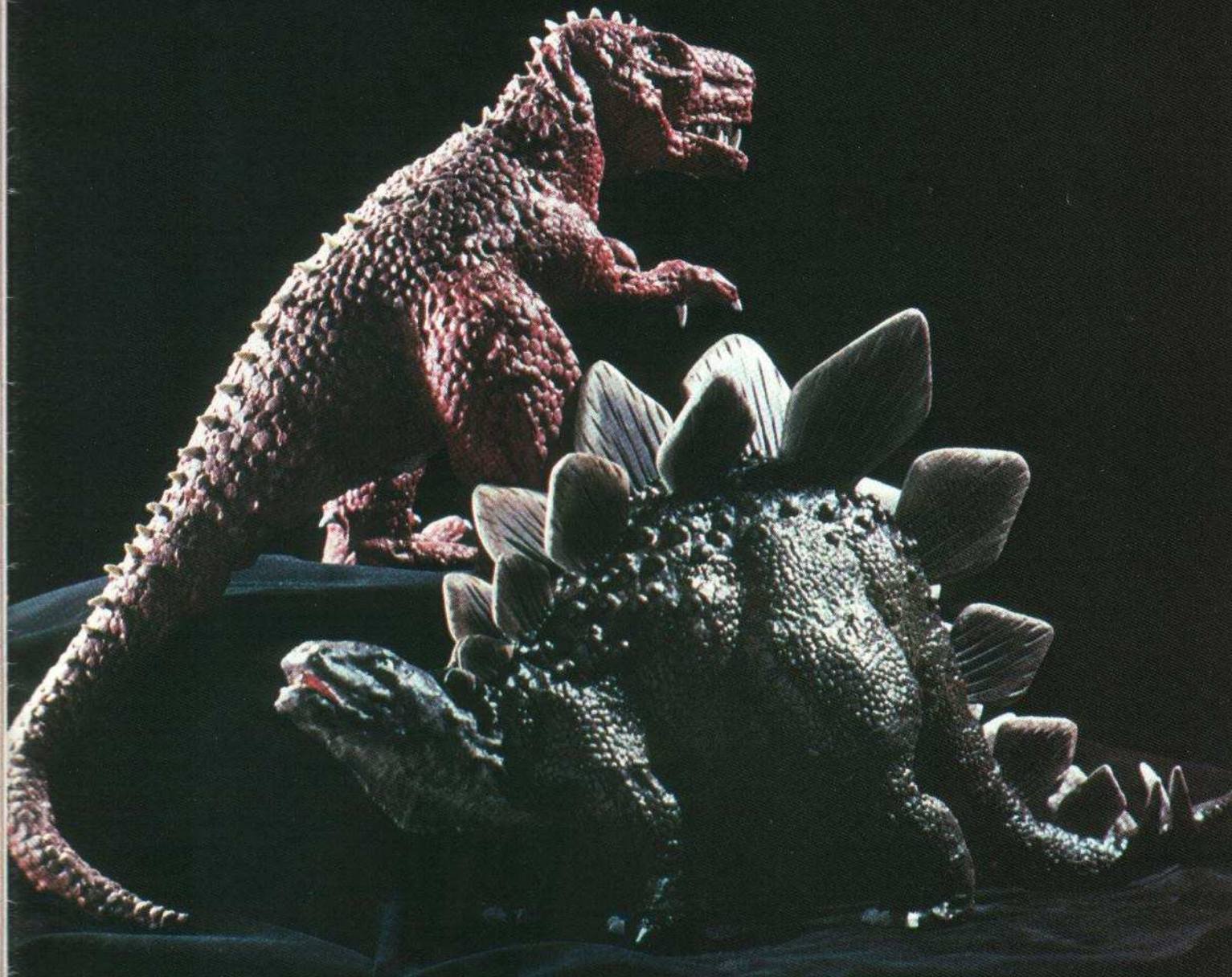
▲ 7. Pour in a little liquid latex and spread it evenly around the mold. When the latex has dried, powder the surface prior to peeling it away from the mold. This prevents the latex from sticking to itself.



▲ 8. Liquid latex is used to glue the skin texture sheets to the model, and to smooth over the seams, after cotton is put into any large gaps or irregularities. The head is built up using tissues and liquid latex.

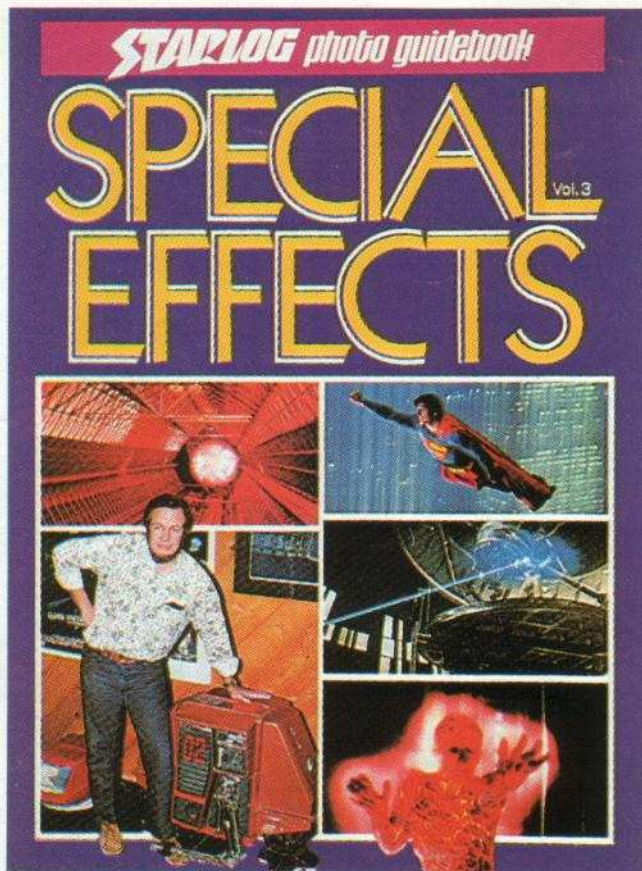
▲ 9. The completed model. The plates are carved out of balsa wood and applied with Krazy Glue. The spikes on the tail and the toenails are made from Sculpy clay. After all these things are applied to the model, it is painted using acrylic paint mixed with latex.

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Two finished dinosaur models, created by building up the "muscles" made of strips of foam rubber over the armature and covering the model with a textured latex "skin." This method is an easy and effective alternative to full body casting.

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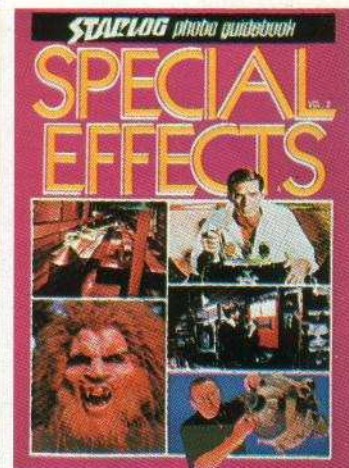
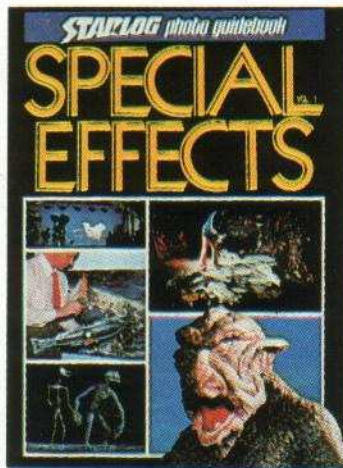
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